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No. 131

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NONALIGNED NEWS AGENCY POOL ACCORDS, CONCLUSIONS REPORTED

Accords Reported

LD201455 Belgrade TANJUG in English 1300 GMT 20 Aug 80

[Text] Managua, 20 Aug (TANJUG)--In the resumption of the fifth conference of the Nonaligned Countries' News Agencies Pool Coordination Committee, held in the capital of Nicaragua, all participant countries expressed their readiness to expand cooperation within the pool and increase mutual assistance, especially in the technical and professional staff fields.

The participants agreed to expand their action aimed at facilitating a more rapid development of the news agencies of the nonaligned countries still insufficiently equipped for equitable participation in the pool. They set out scores of examples of solidarity and assistance in solving technical problems and the training of staff.

All members of the Coordinating Committee have already participated in the general debate held in a very constructive atmosphere. They set forth the principle that the nonaligned countries' new agencies should inform one another of the developments in the nonaligned world and that priority be given to national news agencies in reporting on individual countries.

Many participants expressed the need for being organized appearance in the presentation major international questions such as the struggle against colonialism and dictatorial regimes. [sentence as received] In this context, they especially stressed the need for organized cooperation in the coverage on the struggle of the Palestinian people.

The Zimbabwe delegate, who is attending the conference for the first time as the representative of his nonaligned country's news agency, received a particularly cordial welcome on the part of all the participants.

The conference, due to close this evening, is being attended by 16 members of the pool's Coordinating Committee and the representatives of five other news agencies which also participate in the pool. Present are also the representatives of the national news agencies of Bangladesh, the Democratic

People's Republic of Korea, Cuba, Indonesia, India, Iraq, Nicaragua, Panama, Vietnam, Jamaica, Tunisia, Peru, Sri Lanka, Yugoslavia, Qatar, Venezuela, the Palestinian news agency, Wafa, Mexico, Cyprus, Zimbabwe and the representative of the new Salvadorean INDEPENDENT NEWS AGENCY, recently formed by the Democratic Revolutionary Front of El Salvador, as guest of the conference.

Cuban-Nicaraguan Accord

PA211244 Paris AFP in Spanish 1757 GMT 20 Aug 80

[Article by Gilberto Lopes, special AFP correspondent]

[Text] Managua, 20 Aug (AFP)--The fifth conference of the Coordinating Committee of the Nonaligned Countries' News Agencies Pool has reiterated here the need for greater cooperation among the news agencies of the member countries and the creation of a new international information order.

The signing of an agreement between the NEW NICARAGUA news agency (ANN) and its Cuban counterpart, PRENSA LATINA, highlighted yesterday's events in the field of cooperation. The agreement, which envisages technical and journalistic cooperation between the two parties, was signed here by the directors of the two institutions, Carlos Garcia and Gustavo Robreno, respectively.

The representatives of Yugoslavia and India particularly stressed the increase in bilateral and multinational cooperation among the agencies of the non-aligned countries.

The participants in this conference--close to 20 delegations after the representatives of the news agencies of Palestine, Zimbabwe and Venezuela joined the meeting yesterday--also pointed out the need for strengthening cooperation among nonaligned countries as the basis for the creation of a new international information order.

We reject the thesis that modern technologies will constitute the necessary infrastructure for creating this new order, Cuban delegate Gustavo Robreno stated.

The new international information order implies above all the will for social and political change, without which the new international economic order cannot be achieved, Robreno stressed.

The Jamaican delegate, who charged that a 'psychological war is being waged against her country's government similar to the one implemented in Chile prior to Salvador Allende's overthrow, urged the pool to undertake an in-depth study of new technologies which may eliminate the gap existing in this field in the nonaligned nations.

The conference will close today with the approval of a resolution on the formation of new national news agencies and recommendations from the Non-aligned Countries' News Agencies Pool for the coming UNESCO general conference to be held in Belgrade in September.

It was also learned here that the conference will make proposals concerning price and rate reductions for the exchange of news and concerning cooperation between the member countries of the pool.

A final document will also be published with the results of the 3-day meeting.

'TANJUG' Reports Conclusions

LD211230 Belgrade TANJUG in English 1114 GMT 21 Aug 80

[Text] Managua, 21 Aug (TANJUG)--The fifth meeting of the Coordinating Committee of the Nonaligned Countries' News Agency Pool ended here in Managua yesterday evening. Consensus has been reached on all agenda items and the report on the implementation of the conclusions of the second pool conference, held in Belgrade last year, adopted. The report was submitted by the Coordinating Committee chairman.

The Coordinating Committee has adopted a resolution on the development of communications systems of nonaligned countries' news agencies in cooperation with UNESCO and on the Nonaligned Countries' News Agency Pool's cooperation with the Nonaligned Countries' Broadcasting Organizations Pool.

The committee has called on nonaligned countries' news agencies to prepare programmes for the observance of the 20th anniversary of the first nonaligned summit held in Belgrade in 1961.

The committee devoted special attention to forming new and developing the newly formed news agencies of nonaligned countries.

All participants particularly stressed their satisfaction with the meeting being hosted by a Latin American country. The Managua meeting was the first Coordinating Committee meeting in Latin America. The NEW NICARAGUA news agency and the government of Nicaragua devoted outstanding attention to the meeting. The meeting was addressed by ranking officials of the Sandinista Front and the National Reconstruction Government.

The meeting participants were welcomed and addressed by Revolution Commander Carlos Nunes and Junta member Sergio Ramirez. At the closing session, the participants were addressed by State Council Chairman Bayardo Arze.

The participants in the Nonaligned Countries' News Agency Pool Coordinating Committee meeting met with Nicaraguan Internal Affairs Minister Tomas Borge and Foreign Minister Miguel D'Escoto offered a luncheon in their honour.

The conclusions adopted by the News Agency Pool Coordinating Committee point to Africa as a continent the most heavily affected by poorly developed communications. One of the coming Coordinating Committee meetings will be devoted to the above problem and held in Africa. With the assistance of UNESCO, nonaligned countries' news agencies will work to contribute to the solution of communications problems in Africa.

Closing the meeting, Coordinating Committee Chairman Pero Ivacic stressed the great success of the meeting made possible by the constructive spirit with which all participants contributed to reaching concrete accords. Ivacic paid recognition to the NEW NICARAGUA news agency and thanked the National Reconstruction Government and the Sandinista Front for the great care and support devoted to the meeting.

The next meeting of the Nonaligned Countries' News Agency Pool Coordinating Committee will be held in New Delhi in the first half of next year.

CSO: 5500

WORLDWIDE AFFAIRS

BRIEFS

'TANJUG,' 'EFE' COOPERATION AGREEMENT--Madrid, 25 Aug (TANJUG)--The first agreement on cooperation between the Yugoslav TANJUG and the Spanish EFE news agencies was signed here today. The agreement was signed by TANJUG Editor-in-Chief Mihailo Saranovic and EFE President and Director-General Luis Maria Anson. The agreement provides for comprehensive cooperation between the two news agencies. TANJUG and EFE will daily exchange information and other news material with a view to providing as good and objective possible information about the Yugoslav and Spanish realities, the two countries' international activity and the furthering of cooperation and friendship between their peoples. [Text] [LD251414 Belgrade TANJUG in English 1320 GMT 25 Aug 80]

'TANJUG,' 'ANN' COOPERATION AGREEMENT--Managua, 20 Aug (TANJUG)--The first agreement on cooperation and exchange of information between the Nicaraguan news agency NEW NICARAGUA and the Yugoslav news agency TANJUG was signed here today. The agreement was signed by Director-General of the NEW NICARAGUA news agency Carlos Garcia and TANJUG's Editor-in-Chief Mihailo Saranovic in the presence of representatives of the nonaligned countries' news agencies who are taking part in the current nonaligned news agencies' pool coordination committee session in the Nicaraguan capital. During the signing, which was carried by the Nicaraguan television, Garcia and Saranovic particularly stressed the importance of direct friendly cooperation between the nonaligned countries' news agencies for better mutual knowledge and closer relations among friendly countries as well as for the establishment of the new international information order. The agreement's provisions regulate the exchange of information in written, oral and graphic form for use by the press, radio and televisions of the two countries. The exchange of professional staff is accorded by the agreement which also determines cooperation between TANJUG and the NEW NICARAGUA news agency (ANN) in the framework of the nonaligned countries' news agencies pool. [Text] [LD201040 Belgrade TANJUG in English 0948 GMT 20 Aug 80]

SOUTH AFRICA-TAIWAN NEWS ACCORD--Taipei, Aug 20 (CNA)--The CENTRAL NEWS AGENCY, Inc and the SOUTH AFRICAN PRESS ASSOCIATION [SAPA] Wednesday signed an agreement on news exchange in Taipei. The signing of the agreement will help promote mutual understanding between the two peoples and bring closer

relations between the Republic of China and South Africa. At the signing ceremony held at the CNA building in the afternoon, both Frank C.C. Lin, president of CNA, and Edwin H. Lington, editor-in-chief of SAPA, stressed that the two agencies will provide the public with accurate and impartial news in their efforts to promote democracy and to uphold world peace. Under the agreement, the two agencies will exchange world and regional news by telex or cable. Among those also present at the signing ceremony were officials of the Foreign Ministry and the Government Information Office, and South African Ambassador Louis Vorster. [Excerpts] [OW201421 Taipei CNA in English 1358 GMT 20 Aug 80]

GABON, FRANCE SIGN AGREEMENTS--This afternoon, France and Gabon signed two financial agreements concerning the Moyabi international radio center. The signing ceremony took place at the Ministry of Information and Posts and Telecommunications. The first agreement, amounting to 215 million CFA, will cover the installation work of the 500-kilowatt transmitting station set up in Moyabi, which is expected to provide better radio coverage and reception. The second, of a value of 500 million CFA, was earmarked for the operational stage of the station which is scheduled to start in January 1981. This second amount should also serve first to cover part of the training expenses of the Gabonese personnel who will work both at the Libreville and Moyabi stations and second to pay the necessary foreign experts. The agreements were signed on the Gabonese side by the minister delegate to the presidency for information, posts and telecommunications, Mr Zacharie Myboto, and on the French side by his Excellency Maurice P. Sert, French ambassador to Gabon. Minister Myboto expressed great satisfaction over the signing of the two agreements and commended the excellent relations between Paris and Libreville. He stressed the fact that this signing was another sign of the secular friendship binding France and Gabon, and particularly President Bongo and President Giscard d'Estaing. As for the French ambassador, he stated that the ceremony was another proof of the desire of Gabon and France to make heard their voices through the channel of this specific tool which is the Moyabi transmitting station. [Text] [AB200824 Libreville Domestic Service in French 1830 GMT 19 Aug 80]

'EFE', 'TANJUG' NEWS EXCHANGE--Madrid, 24 Aug (EFE)--Luis Maris Anson and Mihailo Saranovic, presidents of the "EFE" and "TANJUG" (Yugoslavian) news agencies, signed agreements today in Madrid for the exchange of news. A permanent line will be installed between Madrid and Belgrade. The agreement includes exchange of graphic services and cooperation in matters of special interests for the agencies. [PA281905 Madrid EFE in Spanish 1310 GMT 24 Aug 80]

JAPAN'S COMMUNICATION SYSTEM FOR IRAQ--Tokyo, 22 Jul--Oki Electric Industry Co. said Tuesday it has won an additional order from Iraq for a microwave communication system. On order are the system valued at yen 2 billion and crossbar switchboards with 31,000-circuit capacity, valued at yen 1.3 billion. The order was awarded by Iraq's Ministry of Communications through Mitsubishi Corp. This brought the cumulative Iraqi orders for microwave systems to yen 13.5 billion and those for crossbar switchboards to yen 15.8 billion, the company said. [Text] [Tokyo KYODO in English 0025 GMT 22 Jul 80]

NONALIGNED NEWS AGENCIES MEETING--According to a report from Managua, the fifth meeting of the Coordinating Committee of the Union of News Agencies of Nonaligned Nations was held in the Nicaraguan capital 18-20 August. Coordinating Committee representatives from member nations, including our country, attended. The meeting approved all issues on the agenda and the report of fulfilling decisions adopted at the second meeting of the news agencies of nonaligned nations. The participants discussed ways to improve the communications system of nonaligned nations' news agencies and to consolidate cooperation among nonaligned press and broadcasting agencies. The participants adopted a document in this regard. [Text] [SK261246 Jyongjang Domestic Service in Korean 0400 GMT 24 Aug 80]

'VNA'-NICARAGUAN AGENCIES COOPERATION--Hanoi VNA August 26--An agreement on cooperation between the Vietnamese and Nicaraguan news agencies was signed in Managua on August 23. Signatories were Dao Tung, and Carlos Garcia, general directors respectively of the Vietnamese and Nicaraguan news agencies. Under this agreement, the two agencies will exchange information, photographs and professional and technical experiences, and reporters. The delegation of the Vietnamese news agency headed by General Director Dao Tung came to Nicaragua for the fifth conference of the Coordination Committee of the Nonaligned Countries' News Agency Pool. While there, it was cordially received by Segrio Ramirez, member of the Council of the Provisional Government for National Reconstruction; Bayarilo Arce, chairman of the State Council; Tomas Berge and Carlos Nunez, members of the National Committee of the Sandinista Front; and Miguel D'Escoto, minister for Foreign Affairs. The Nicaraguan leaders expressed their admiration for and close solidarity with the Communist Party, the government and the people of Viet Nam. [Text] [OW261754 Hanoi VNA in English 1739 GMT 26 Aug 80]

CSO: 5500

INTER-ASIAN AFFAIRS

BRIEFS

ASIA-PACIFIC BROADCASTING EXCHANGES--Colombo, 1 Sep (XINHUA)--Exchange of television and radio programmes, satellite communication and distribution of radio frequencies and the training of personnel were some of the topics covered here at the 17th General Assembly of the Asia-Pacific Broadcasting Union which ends today. The 2-week meeting also discussed ways of promoting cooperation with other regional broadcasting unions. Associated meetings covered such topics as engineering and programming. The assembly was attended by 129 delegates representing 44 member organizations from 33 countries and regions. Representatives from United Nations agencies and observers from other regional broadcasting unions were also at the meeting. China is one of the 12 general council member countries. The next general assembly of the Asia-Pacific Broadcasting Union is to be held in Manila late next year. [Text] [OW01352 Beijing XINHUA in English 1530 GMT 1 Sep 80]

WRITER DESCRIBES SRIHARIKOTA LAUNCH COMPLEX

Madras THE HINDU in English 10 Jul 60 p 8

[Article by S. Parthasarathi: "Complex Task of SLV Launch"]

[Text] India's first Satellite Launch Vehicle (SLV-3), if all goes well, will be borne spaceward soon day between July 17 and 21 on a jet roaring its way across the sky from the Sriharikota Launch Complex of ISRO.

The count-down has actually started, in terms of days, and excitement is noticeable among the engineers, scientists and others working in this organisation towards this consummation.

An earlier experimental launch of SLV-3 took place on August 10 last year. The 17-tonne vehicle lifted off with the giant rocket lifting up with a seething burst of flame and kept the pre-determined trajectory until the first stage separation. Unfortunately, then onwards a malfunction in the reaction control system in the second stage caused it to deviate from its course. ISRO scientists do not agree it was a fiasco. According to them, nearly 70 per cent of the systems worked to the machine requirements.

The ISRO team is watching with fingers crossed the agonising preparations for the second experimental launch this month, having provided suitable corrective action in the light of the faults noticed in the first abortive launching.

During a fascinating tour of the sprawling facilities in the island of Sriharikota one was struck by the energy and the resolute optimism of every one involved in the launching. This time, the vehicle will carry the Rohini satellite RS-1 instead of the Rohini Technological Payload.

Successful launching of SLV-3 would lead to basic launch vehicle system capability for eventually placing application satellites of the country in earth orbit and establish India as the sixth nation in the world to attain such capability.

Mr T. N. Seshan, Joint Secretary, Department of Space, Government of India, explained that the primary aim of the experimental launches was to evaluate

the performance of the vehicle's 14 major systems and the secondary objective was to assess its capabilities to inject a 50-kg. satellite into a low elliptical orbit.

Four-stage Rocket

Efforts would be directed later towards acquiring capability for placing up to 150kg satellite into orbit. According to Mr Seshan, and Mr. N. Pant, Director of SHAR, even the fact of being able to reach the stage of integrating the various rockets is a commendable development.

Assuming the launching of SLV-3 in the second fortnight of this month is an unqualified success, where does India stand in this sophisticated field? No doubt, it will join the small group of nations which have established their capability to place payloads into earth's orbit. Observers however point out that India would only be in the state where the USSR was in 1957 when it launched its Sputnik. Jumping the learning curve may not be impossible for India so that advanced application satellites launched from India's own launch pads are not a distant phenomenon. The provision of Rs 900 crores for developments in space during the next 10 years gives encouragement to scientists and engineers working in ISRO to aspire to rise to the level of advanced countries.

The tour of the vehicle launch complex in SHAR clearly showed how complicated the whole business of fabricating and launching a satellite carrier vehicle is. By its technological complexity, SLV-3 exemplifies the amalgamation of several areas of engineering and science.

Some of the highlights of SLV-3 may be mentioned: It weighs 17-tonnes before lift off and has a length of over 22 metres. It is a four-stage solid propellant rocket. The control, guidance, and electronic and other systems like stage separation, destruction and heat shield make up the vehicle.

The vehicle will be capable of injecting a 50-kg satellite in a low earth orbit. The fourth and final stage gives almost half the required speed of 28,000 km per hour to the satellite to get into orbit. There are 44 major systems and 250 sub systems.

Several thousand electrical and electronic components are used in the vehicle making up 560 functional units. There are about 800 integrated circuit chips, 300 transistors, 450 diodes, 1,000 capacitors, 2,000 resistors, interconnected through 1,500 multiple connectors. A million meticulously soldered joints connect the electrical network together. Forty-six major industries and institutions spread all over the country have contributed their mite to the building of the SLV-3 vehicle.

Sriharikota, a backwaters island, on the east coast, about 100 km north of Madras, is India's principal rocket and satellite launching station. Satellite launch vehicles are usually launched eastward so that they may acquire, as a free bonus, the velocity of the earth's rotation from west to east.



Located on SHAR are facilities for propellant manufacture for the static testing of large rocket motors as also facilities for flight tests and launch of indigenously developed multi-stage rockets and satellite launch vehicles together with telemetry, telecommand, tracking and data acquisition support.

Propellant Plant

The satellite launcher, launch pad, block houses, vehicle integration building, workshop and the service buildings are the major facilities in the SLV complex. The control centre, the nerve centre of activities for launch operations, houses range safety, telecommand range timing, close circuit TV, communications controls and real time tracking equipment. The tracking system consists of radars and tone range/interferometer.

A large indigenously designed and engineered solid propellant plant has been set up with adequate capacity to process solid propellant for India's launch vehicle programmes. It can cast huge monolithic propellant grains.

Questions are raised whether in view of the heavy cost involved in the space programme (one experimental launching from SHAR costs as much as a crore of rupees) it would not be cheaper to hire application and other satellites from developed countries for our use. The engineers and others were not in a position to afford a straight answer to this fundamental question. They, however, raised a counter question: Does this not apply to other areas also like nuclear power stations? An American company on a turnkey basis could build a 100 nuclear power stations in India in two or three years. Then, why go in for indigenous efforts?

It is, however, undeniable that space technology not only imparts a new dimension and purpose to the whole spectrum of science and technology but also gives a new thrust to the pace of socio-economic development. Transmission of TV programmes in remote villages, communication to marooned areas, and remote sensing of the earth would not have been possible but for this sophisticated technology which has been acquired in a good measure by Indian scientists and technologists.

With the objective of reaping the benefits of space technology to the fullest extent, ISRO is engaged in a number of projects like the Indian National Satellite being built by a U.S. company to be launched from a launchpad in that country and the Ariane Passenger Payload Experiment, India's first three-axis stabilised geostationary experimental communication satellite now under development by the European Space Agency to be launched from a European pad. These projects will no doubt contribute significantly to India's technological self-reliance which in turn will act as a catalyst to the overall growth of the economy.

CSO: 5500

BRIEFS

ASEAN NEWS AGENCIES TELEX--Direct telex communication among national news agencies in three ASEAN countries was formally and simultaneously opened in the respective capitals on 18 June. The 3 news agencies are ANTARA of Indonesia, BERNAMA of Malaysia and PNA of the Philippines. In Jakarta, the formal inauguration of the telex communication network was conducted by the secretary general of the department of information, Sutikno Lukitodisastro, on behalf of Minister of Information Ali Murtopo. The formal opening was marked by dispatch of the first news item from ANTARA to PNA and BERNAMA. The dispatch of the news item from Jakarta to Kuala Lumpur, and vice versa, was routed through Manila by Palapa satellite, because the computer center is located in the Philippine capital. The formal opening represented the culmination of meetings between various ASEAN news agencies in Manila in July 1979. Representatives of TNA of Thailand were also present. At present, this new direct telex network is being put to good use by the 3 news agencies. It is hoped that TNA will follow suit, whereas the remaining ASEAN member, Singapore, does not own a governmental news agency yet. The computer-controlled electronic system is capable of transmitting words at a speed of 66 to 100 words per minute. It is hoped that it will reach a speed of 2,400 words per minute in the future. Each unit utilizes 2 teleprinter machines, costing 7 million rupiahs each. According to one of ANTARA's directors, Bakti Bakar, this system will operate continuously for 24 hours, but for the moment only a small portion of its full capacity is being utilized. [Excerpts] [Jakarta KOMPAS in Indonesian 19 Jun 80 pp 6, 9] 9300

TV RELAY STATIONS--Jakarta, 23 Aug (AFP)--The Indonesian Government will within this (April to April) fiscal year build five television relay stations in Riau Province alone for the relay of Jakarta television programs and lessening local dependence on foreign broadcasts, an Information Ministry spokesman said today. Following the recent inauguration of a 1,000-watt television relay station on Batam Island near Singapore, another TV relay station will be built on Batam's south-east neighbour Bintan Island. Meanwhile, the Information Ministry will take charge of the building of four more stations of 300 to 1,000 watts on the far outstretched island-rich province, which borders Malaysia, Singapore, and the South China Sea. Two will be built in the province's west (in Bengkalis and Dumai) and two on its eastern islands Natuna and Tarampa on the South China Sea. [Text] [Hong Kong AFP in English 0720 GMT 23 Aug 80 BK]

MONGOLIA

BRIEFS

MICROWAVE STATION COMMISSIONED--Ulaan Baatar--A microwave communications station has been commissioned ahead of schedule in Arvayheer, the center of the Ovorhangay Aymag. It will link up the western regions of the republic. Now the people of this area will be able to receive television transmissions from Ulaanbaatar. A unified radio and television network is being created in Mongolia. In accordance with the agreement between the governments of the USSR and Mongolia on economic and technical aid, the construction is planned of a 600 km long microwave line which will link Ulaanbaatar with (?Upkanhaan) and Choybalsan, and will allow the inhabitants of all the republic's Aymags to receive television transmissions from the Mongolian capital. [LD261830 Moscow Domestic Service in Russian 0630 GMT 23 Aug 80]

CSO: 5500

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

MICROWAVE LINE INAUGURATED--According to our sources, the Shenyang PLA units have assigned the construction and management of the main microwave line linking Beijing, Shenyang, Changchun and Harbin to the Ministry of Posts and Telecommunications. The assignment ceremony was held in Shenyang 18-19 August. Attending the ceremony were Zhu Chunhe, vice minister of posts and telecommunications, and (Sun Ao), deputy chief of staff of the Shenyang PLA units. Li Desheng, commander of the Shenyang PLA units, and Chen Pupu, governor of Liaoning Province, visited the participating comrades. In 1970 the State Council and the Military Commission of the Communist Party Central Committee assigned the Shenyang PLA units to build this main microwave line connecting Beijing, Shenyang, Changchun and Harbin. Under the leadership of the CCP Committee of the Shenyang PLA units, more than 100,000 people from 27 municipalities and districts joined in this construction and completed it within 1 year. This main microwave line conveys Beijing television programs to the three provinces in northeast China and to localities in Hebei Province. Now under the authority of the Ministry of Posts and Telecommunications, this main line will be supplemented with new equipment for various (?functions). [Text] [TSK230500 Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 22 Aug 80]

CSO: 5500

KUMSAN SATELLITE COMMUNICATIONS, EARTH STATION MARKS 10TH ANNIVERSARY

Tokyo THE TONG-IL ILBO in Japanese 5 Jun 80 p 2

[Text] On 2 June 1980 the Kumsan Satellite Communications and Earth Station, whose establishment marked the beginning of the space communications age in South Korea celebrated its 10th anniversary. The earth station was established on 2 June 1980 with a domestic capital investment of 280 million won and a foreign capital investment of 5.89 million won. Seven years later, in 1977, the second earth station was established. In 10 years the communications network has expanded with 705 regions of the world including Africa and the Pacific Islands not to mention Europe and the United States.

When it was originally established, the Kumsan Satellite Communications and Earth Station operated 21 vocal circuits and only 1 visual circuit, and the regions with which communications could be exchanged were limited to Pacific and Southeast Asian regions such as the United States, Hong Kong, the Philippines and Taiwan. On 25 February 1977 the Second Kumsan Earth Station, which linked South Korea with the Indian Ocean region, was established and, by means of a connection with the communications satellite over the Indian Ocean, a network which could exchange communication with almost the entire world was built.

Thus, the satellite communications circuits presently in operation number 245 compared to the original 22, indicating an 11-fold increase in 10 years, and the annual number of international communications has rapidly increased to around 7 million. The vocal and visual quality of the communications network made possible by communications satellites is excellent, and because very efficient communications service can be given, there is a worldwide tendency toward a rapid increase in the demand for satellite communications.

At present there are five communications satellites circling the globe, linking the whole world in a communications network. Out of these five, South Korea uses two satellites, Intersat 4-F8 above the Pacific Ocean and Intersat 4-A-F6 above the Indian Ocean. The First Kumsan Satellite

Earth Station operates the communications network which links South Korea with the nations of the Pacific region by means of 190 circuits. The second Kumsan Earth Station operates 55 circuits which connect South Korea with the Indian Ocean region and Europe.

Direct circuits link 24 regions including the Americas, Europe, Southeast Asia and Central America, and a worldwide comprehensive communications network of telegraph, telephone and telex covering 705 regions has been established.

The second Kumsan Earth Station was set up on 19 December 1975 with a domestic investment of 1.71 billion won and foreign investment of 3.15 billion won for a total of 4.86 billion won, and in 1 year, 8 months construction was completed. The second Kumsan Earth Station, along with the first station is located on Mount Kum in South Ch'ungch'ong Province covering an area of 20,000 tsubo (around 711,200 square feet). It has the latest communications equipment including one antenna 47 meters high with a diameter of 30 meters, three high power electric amplifiers, and one complete television standard transformation machine.

By completing the second Kumsan Earth Station it became possible to directly exchange international telephone and television images from Europe, the Middle East and Africa, which had up to that time come through Japan or Hong Kong, without being relayed by a third country. In addition, operational methods have also changed: telephone communication has changed from a manual system to a half automated one, telex communication has changed from half to fully automated, and the waiting period for communications requests has been reduced from 25 to 15 minutes.

9427

CSO: 4105

ENTEL SHORT, MEDIUM-TERM PLANS DETAILED

Buenos Aires CONVICCION in Spanish 17 Aug 80 p 15

[Interview with Col Luis Alberto Amallo, general administrator of the National Telecommunications Company (ENTEL); date and place not given]

[Text] [Question] Since the operational regionalization of ENTEL, the company has assumed a new legal format because, according to the plans, corporations will be formed from the current regional administrations. In this regard, what will the state's role be in this process, what will that of private enterprise be, and what advantages will this system bring for the development of the service?

[Answer] The organization of the National Telecommunications Company at present consists of one central entity and five regional development administrations. The regionalization plan includes various phases, some of which have been carried out and others which are in the process of execution, namely: logistic decentralization and accounting decentralization; and finally, companies will be established which, when combined, will make up a holding entity of companies. ENTEL will continue to be the core of this organization, indicating that the state will retain control of the communications policy. The format which the regional companies will assume has not been decided yet but, in principle, it may be said that they will accept the participation of provincial or municipal private capital.

This system will bring about a considerable speedup in administrative action, with an attempt to achieve increasingly greater participation by the users themselves in meeting the regional demand for the various services currently being rendered, and other new services to be included, in keeping with the local needs.

The data for the consultation will stem from the conclusions of the pertinent studies undertaken by the State Secretariat for Communications.

[Question] In what phase is the plan for construction of the new ground station for satellite communications in Bosque Alegre, Cordoba?

[Answer] A total of 19 national and international companies appeared for the National Telecommunications Company's bidding on the construction of a new ground station for satellite communications in Bosque Alegre, in Cordoba Province. The opening of the envelopes containing the bids for the supply, installation and putting into service of the equipment for the new communications complex that has been planned took place on 12 March of this year.

The plan for this second ground station calls for a modern communications system, which will have an antenna approximately 32 meters in diameter, and transmitting and receiver equipment to carry, initially, the traffic from about 500 telephone, telex, data transmission and color television circuits.

The Bosque Alegre station will increase Argentina's international circuits with the rest of the world and, at the same time, will make it possible to physically decentralize the traffic with the external area. It is estimated that the new ground station will go into service during the first half of 1982, which will make it unnecessary for the international calls originating in the northwestern part of the country to have to go through Buenos Aires. Similarly, part of the communications originating in the Buenos Aires area will be diverted to Cordoba, to be carried by the new satellite.

In conjunction with the installation of the new complex, other work will be done for the purpose of connecting the satellite signal with the urban exchanges of subscribers, by means of automatic switching centers located in Buenos Aires and Cordoba.

With the aforementioned projects, it will be possible to gradually convey the automatic calls to any part of the world, without the operator's intervention. It will also be possible to extend this service, which is currently being rendered to subscribers with major international traffic, to all the subscribers in the system.

The studies which were conducted to determine the site on which the new station will be built took into account the interference of a radioelectric type, with resultant geographical protection, as well as the infrastructure for hookup with the national system, and the weather conditions that exist.

When the most appropriate sites were analyzed, the Cordoba area, particularly that of Bosque Alegre, located in the Alta Gracia section, appeared to be a favorable place. There is a valley in that area, surrounded by the Chicas and Grandes [small and large] Sierras, forming a natural shield.

The interconnection with the capital city of Cordoba will be made by a microwave radio hookup with a large capacity, which will allow for the conveying of any type of information, including television.

With respect to this project, it should also be added that, inasmuch as there has been an increase in international communications throughout the world, the Intelsat organization arranged for the establishment of an operational

system in the Atlantic Ocean area (the one with the most traffic), with three operative satellites. Therefore, in order to maintain total communication with them, it will be necessary to have the three corresponding antennas.

The Intelsat organization consists of over 100 countries, including Argentina, which is a major participant. To undertake this project, the cost of which has been estimated at \$20 million, the bidders appeared in seven groups of businessmen, some representing Argentine firms and others associated with companies from France, Italy, Japan, Canada and the United States.

The execution of the project was awarded to the following firms: Mitsubishi Corporation, Petersen, Thiele and Cruz, S.A., and Nivilco SACI, which, in accordance with the terms of the contract, are committed to complete the project within a period of 20 months.

[Question] What is the status of the project for the Buenos Aires Digital Belt?

[Answer] In early March, the contract was signed with the Japanese firm, Nippon Electric Corporation, for the supply, installation and putting into service of equipment for hookups and interconnections in the so-called Buenos Aires Digital Belt, at a cost of \$55,823,472.30 for imported materials, and 70,183,295,000 pesos for national input.

This project constitutes one of the most important plans undertaken by the National Telecommunications Company. It will enable us to incorporate modern digital switching technology, as well as to use optical fiber cable (which is already being used by some exchanges).

The Buenos Aires Digital Belt is planned to go into operation by the end of 1981. It will make possible the dispersion of the calls originating in the federal capital and directed toward the suburbs, and vice versa, as well as the communications between exchanges in Greater Buenos Aires, which at present are entering the capital to be interconnected.

The work to be done through this contract consists of the updated resizing of the intercentral lines, and the replacement of the interurban exchanges located in the districts of Flores, Belgrano and Barracas, which are half a century old and have electromechanical technology. They are not geared to the increasing telephone traffic. This is why they will be replaced by six exchanges with digital technology, which have a larger capacity and variety of switching alternatives. The six exchanges are divided so that three of them will be located in those to be replaced, and the others in the localities of Ramos Mejia, Munro and Monte Chirigolo.

The new system will make it possible to provide rapid, smooth telephone service. The peripheral exchanges, located in Greater Buenos Aires, will be joined by a digital system, forming a belt through which the entire telephone traffic between suburbs will be carried.

Some of these exchanges will replace others which have finished their term of useful life, thereby benefiting the subscriber, who will have better service.

This semielectronic technology is regarded as transitional, because there will soon be totally electronic technology. This extensive projects plan undertaken by the National Telecommunications Company is being financed with its own funds, originating from the rendering of the service.

There are no delays in the awarding of the aforementioned bids, because work is well on its way in the process established to arrive at the final decision. Thus far, ENTEL has performed the task assigned to it, namely, that of study and technical advice.

Insofar as this awarding of bids is concerned, on 30 March 1979, the national executive branch passed and promulgated Law 2386 which, together with Decree 817 (of 11 April 1979) authorizes it to hold bidding of an international scope, for the purpose of selecting native and/or foreign private companies to contract with them directly for the manufacture of switching equipment in the country, and for its supply and installation.

In addition, through the aforementioned decree, a preawarding committee was created, assigned by the Ministry of Economy and consisting of the technical undersecretary of the State Secretariat for Communications; the technical undersecretary of the State Secretariat for Industrial Development; the foreign investment undersecretary of the State Secretariat for Industrial Development; the foreign investment undersecretary of the State Secretariat for Economic Programming and Coordination; the international economic negotiations undersecretary of the State Secretariat for Commerce and International Economic Negotiations; the coordination undersecretary of the State Secretariat for Economic Programming and Coordination; and the general administrator of the National Telecommunications Company.

[Question] What were the reasons which prompted ENTEL to transfer certain services to private industry?

[Answer] According to the guidelines established by the supreme government of the nation in 1947, the company began to diversify to private industry all the activities not directly related to the rendering of services.

Various activities, for example, civil construction, building maintenance, and the construction and repair of external cable equipment, were diverted to private industry.

In order to transfer the construction of external equipment to private industry, international bidding was held; and as a result, eight national firms were solicited which, together with foreign firms, are now engaged in work in different areas of the country.

[Question] What investments does the national telephone plan call for over the short and medium term? What financial resources does the company have on hand for making them? And, with regard to the international bidding held by ENTEL for the incorporation of 351,000 telephone lines into the system, virtually all the supplying firms in the world have made offers. In the first place, could you tell us the features of the new technology with which the system will be equipped? Secondly, what were the reasons for the delay in the awarding of the bids? Thirdly, what criterion will govern the awarding of bids, considering the lower costs entailed in the Japanese bid, in comparison with the reliability of the companies which have been established in the country for years?

[Answer] The company is constantly incorporating new technology, so as to keep gearing the services that it renders to the advances that are being made in the field. This holds true for the equipment with semielectronic technology, for which ENTEL has held bidding for the supply, installation and putting into service of 351,000 telephone lines, with an option for 200,000 more, for which eight groups of business owners have appeared, some native and others associated with foreign firms.

The 351,000 lines will be housed in exchanges controlled by processors, with a control system using a stored program (SPA), and they will be installed within a period of 4 years. When that period has elapsed, ENTEL is authorized to contract directly, during the following 11 years, with firm or firms awarded the bid, for the supply of 150,000 lines per year.

The semielectronic exchanges, a step preceding the digital technology, will render the user new services: international dialing, abbreviated numbers, limited service (incoming or outgoing), priority subscribing, direct automatic connection, transfer and conference service, and waking and "do not disturb" service.

It should also be emphasized that the company has new facilities which are speeding up and improving the service, and, at the same time, making it more economical.

The area occupied by these new exchanges is about 60 percent of that occupied by the electromechanical exchanges.

It is the presawding committee which will issue the regulations for the awarding in this bidding, and the executive branch will be the one to finally back the transaction.

2909

CSO: 5500

OFFICIAL CITES AIMS FOR RADIOBROADCASTING EXPANSION

Buenos Aires LA NACION in Spanish 4 Aug 80 p 13

[Text] In connection with the recent publication in our columns of an editorial comment on the plan for border radiobroadcasting, Col Luis H. Grandinetti, administrative undersecretary of the Secretariat of Communications, has sent us a note in which he states:

"In this regard, I would like to point out that, when the reasons which prompted the preparation of the plan are probed deeply, one can understand that, for its implementation, three major aspects were considered which, when they are carried out, will afford: a. better administration of the frequencies and powers of the broadcasting stations; b. greater propagation; and, c. proper adaptation to the zonal socioeconomic features.

"Insofar as the first point is concerned, it should be noted that the present distribution of powers and frequencies is based on a carefully devised document (DTB) to allow for proper coverage of the geographical areas without causing mutual interference with medium waves. An increase of power on shared frequencies would entail the disappearance of the stations with the same frequency or serious disturbances in them. On the contrary, the trend in countries which are advanced in the field is to reduce the powers and increase the number of stations.

"Insofar as medium-wave propagation is concerned, raising the power to achieve a correlated increase in the area of coverage is not linear, so that the increases in power are not proportionate to those in the areas covered. Very high figures can readily be reached (as may be noted in some European broadcasting stations) without making the area covered substantially larger, but their operating, installation and maintenance costs are increased considerably. On metric waves (FM-VHF) the situation is even worse. There is virtually no alternative to gaining covered areas by means of substantial increases in power, as may be readily observed in the TV stations, which have attempted to achieve this effect through repeating stations, as it is planned to do in this case with resonant radiobroadcasting. In addition, other data relating to wave propagation must be taken into account, such as the

terrestrial conductivity and the topographical features of the areas which it is desired to serve.

"Finally, the adaptation to the zonal socioeconomic features will make it possible to increase the activity in each zone, resulting in greater participation by the population, and allowing the latter to receive news at all times."

2909

CSO: 3500

CORRADO PLANS TO MODERNIZE TELEPHONE EXCHANGE SYSTEM

Buenos Aires LA PRENSA in Spanish 24 Jul 80 p 7

[Text] In a radio interview, the state secretary of communications, Brig Gen Eduardo Corrado, claimed that 75 percent of the telephone equipment is assigned to family residences and the remaining 25 percent to business firms, associations and other categories. He added: "That 75 percent is paid for at a monthly rate of 28,536 pesos when located in areas with over 100,000 telephones, and if the density is less, the rate is even lower."

With regard to the complete renovation of telephone exchanges, the official stated: "It would be relatively easy for the telephone service to operate better, but we would still have exchanges 50 years old, and the sky over Buenos Aires would be filled with cables crossing the buildings. We would repair it more quickly, but there would always be disturbances and lack of tone. However, I am convinced that improvement is not the main objective: making great changes in the structure of the current service is what is required at present."

Corrado went on to say: "It is not a matter of patching, but rather of changing and modernizing the entire system. This is what people do not understand. Everything is being renovated at present and, when it is finished, we shall have the pleasure of using better service. We might compare this with the widening of an avenue, or the construction of a highway; there are annoyances in the meantime, but when it is completed we enjoy it."

On the subject of the "sovereignty plan," General Corrado explained that it involves a satellite system which will reach "the most remote sections of the country, where the plans that are being executed or studied do not call for providing them with communications service for another 4 or 5 years, and the access to which by land is very difficult. The 'sovereign plan' calls for the installation of antennas and the operation of satellite communications, covering the most remote areas and essentially the border zone. It will allow for the transmission of television to settlements with 400-500 inhabitants, and will provide long-distance dialling all over the country. The income return from this program will be virtually nil. The investments to be made over 75 percent of Argentine territory are not profitable; and this is one of the aspects that the users and public as a whole do not realize."

2909

CSO: 5500

Fig. 1. 9.

Telegrapho Chaykashchik. Moscow—(TASS)—A report from the country's Secretariat of Public Works and Services shows that the country's communications system is "extremely backward" for meeting the existing demand, and hence the government is studying two alternatives to solve this problem. The report, which gives data from the All-Union Telephone Company, shows that as of 11 December of last year, there were 12,100 defined requests for telephone installation and 1,177 orders for consumers because of shortage of facilities, representing 16.24 percent of the total lines installed. Of these orders, 10,239 related to main city, and 1,817 to the territory of the province. It was reported that 4,000 subscribers delayed their orders are being informed of the extent that interest must be paid for the installation of the wire. In view of this situation, the government is examining the possibility of installing a radio system for interconnecting the rural communities with one another and with the central organizations and the Government buildings. This plan, ready for bidding, has been submitted to the government by the main telephone center. The report also analyzes a second alternative, consisting of the use of a microwave system which would make it possible to cover the entire country with a system of wireless communication channels. This solution would require an investment of 5 billion pesos. (UPI) (Radio Free Europe) (TASS) Moscow 12-24-57 Dec 1 - 11 1957

PLANNED SATELLITE COMMUNICATIONS--(OFFICIAL SOURCE)--The government yesterday called off the dogs for the localization and servicing of a new national satellite communications system. This will allow the integration at small groups of individuals in remote parts of the country to the ENTEL network communication network. A statement issued by the government says the operation will first start to serve a home land communications system but eventually bigger radio and television transmissions. Argentina has already contracted with INTELSAT for the launch of its satellites. The temporary system is to be located at Mendoza where the Argentine agency for satellite communications is located. The new system will have two hot stations at Mendoza and Mar del Plata, which in turn will relay signals to Europe to the west of the Andes Mountains and Patagonia. (One) (PTE)(R) source says (NAME) in English 20 Aug 80.

CLOSED CIRCUIT TELEVISION--Neuquen, 21 Aug (TELAM)--The Federal Radio Broadcasting Committee has ordered Cutral Company's closed circuit television channel to stop broadcasting as of 31 August 1980. The television station belongs to the Union of State Petroleum Workers [Sindicato Unido de Petroleros del Estado] (SUPE) and does not meet legal requirements. [Buenos Aires TELAM in Spanish 0445 GMT 21 Aug 80 PY]

SATELLITE COMMUNICATIONS--Buenos Aires, 19 Aug (TELAM)--The National Telecommunications Company has announced that it has appropriated 71.44 billion pesos for the equipment, installation and operation of the national satellite communications system. Bidding will close on 31 November 1980. The national telecommunications system covers an area from Rinconada, Jujuy Province, to the Argentine Antarctic, across the entire country. [Buenos Aires TELAM in Spanish 2150 GMT 19 Aug 80 PY]

CSO: 5500

BRIEFS

DIRECT SATELLITE COMMUNICATIONS--The presidential house yesterday reported that Costa Rica will have direct communications via satellite with any country in the world. The remote-control Intelsat satellite will be used from San Pedro through geostationary waves. Our country is currently depending on the communications that Nicaragua and Panama have through the same system. The opening of this modern international means of communication is the result of the visit of George Metcalfe, a U.S. expert from NASA who is helping the Costa Rican Electricity Institute in these matters. It was reported that special antennas will have to be purchased to hook up to this satellite. These antennas are technically known as pickup antennas [antenas captadoras]. With this equipment Costa Rica will have direct communications with any place in the world quickly and efficiently. The Intelsat satellite has five channels, three of which are currently used. Only American companies will participate in the bid to be opened in the next few days because the United States is the only country that produces and exports this type of antenna. [Excerpts] [PA291740 San Jose Radio Reloj in Spanish 1200 GMT 29 Jul 80]

CSO: 5500

CARIBE EARTH SATELLITE STATION FULLY OPERATIONAL NOW

Havana GRANMA in Spanish 9 Aug 80 p 2

[Article by Jesus Mena; passages enclosed in slantlines printed in boldface]

[Text] The Caribe Earth Satellite Station of the Intersputnik system is one of our most modern means of international communications and a very eloquent example of the solid ties of scientific and technical cooperation between the Soviet Union and Cuba. It is part of our determination to give the country the most modern communications systems.

The Caribe Earth Station will receive and transmit images to all the country so that we Cubans will have the opportunity to see the joint Soviet-Cuban flight under the Intercosmos Program on our televisions as we have seen other space flights in the past. Two of our pilots have been training for months for this in "Star City" in the Soviet Union.

Precisely because we have that earth station, our people recently were able to fully enjoy the marvelous spectacle of the Moscow-80 Olympics, the first held in a socialist country, from their homes with optimum quality as had been promised.

It was necessary to invest many hours over a long period of time to make this possible. Our specialists, engineers and technicians of EYTELCUBA [International Telecommunications Enterprise] of the Ministry of Communications arranged all the details of the organizational and technical measures to be taken so that no link in this complex system would fail.

The last phase of preparation for this event was carried out in Budapest, Hungary, with the participation of other countries in the socialist bloc that would receive transmissions of these programs. Their final information was given on the technical condition of the earth stations in the intersputnik system in order to receive these transmissions. Cuba was ready for it.

Engineer Jose R. Carbonell, head of maintenance and operations at the center and one of the first six comrades selected to be trained in the USSR

In satellite communications, this meant that the number of auxiliary telephone channels was considerably increased and the television channel was improved for this event. Also appropriate measures were adopted to improve radio, audio and video signals and teletext channels.

Cartonell said that his technicians worked an average of 17 hours a day to receive all the programming from the Television Olympic Center in Moscow during the 15 days of the event. This meant an average of 500 hours of overtime work by his workers. They did this in good spirits and with a single interest—to insure that our people saw a spectacle that was exceptional for its beauty, color and organization.

In order to achieve such a clear television image and even clearer audio as were received here and elicited constant praise from our people, the Soviet geostationary satellite "Ekspluzor-4" was put into orbit 35,000 kilometers above the Atlantic Ocean. One of its advantages is that it moves with the same velocity of rotation and movement as our planet; this eliminates transmission interruptions during satellite passages.

It also has a greater number of channels and substantial technical improvements over its predecessors, the "Volna" satellites. It was necessary to use four of these older satellites during a 20-day day.

Inside the Orbits Earth Station

This vast complex which is permanently open to receive and transmit our international communications is located in Puerto Rieco, Mexico Province.

Built in 1973, its first transmission coincided with the 7 November celebration held in Red Square in Moscow. A tour of the installations reveals a marvelous scene; the complexity and the beauty of the equipment there remind us that we live in a century of the most astonishing scientific and technical advances.

This station has several rooms. One is the /guiding/ room where the trajectory of the satellite is followed by the antenna. It contains very modern equipment including a command and control desk for the antenna focused on the satellite.

This operation can be done manually or automatically. In the first case which is less frequently used, the operator uses servomechanisms to indicate the movement of the antenna to keep it constantly focused on the satellite. The other method uses automatic or programmed tracking and automatic correction of the program. Programmable machines with specific functions directly adjust the commands to the flight program of the satellites launched by the USSR.

The /receiving/ room is where the television and radio signals sent from the satellite first arrive. These signals are sent from here to the

/television/ room where they are processed, controlled, checked and carefully elaborated.

The telephone room is divided into two basic parts. One has conventional multiplex equipment to link the station to the system installed by the Ministry of Communications; the other has earth station multiplex equipment that links it with the satellite.

The use of satellites in the reception and transmission of signals that are received in this center and in similar stations in other socialist countries incorporated in the Intersputnik system replaces point to point connections used in conventional communications systems and provides rapid and efficient communications among these countries and with other parts of the world.

Decisive Soviet Aid

Soviet aid for the installation of an earth station in our country has been multifaceted. It has included construction of the main building, assembly of the equipment, training the Cuban technicians and engineers in charge of its operation and exploitation and the organization and operation of the center itself.

Since the conception of the project, Soviet specialists have come to share their rich experience and knowledge with our young technicians who today are capable of operating the Caribe Earth Station and the Intelsat system connected with it by themselves.

Due to the support given by the USSR, today we not only have the six engineers who were originally trained in satellite communications in that fraternal country but a new generation of highly skilled technicians who are in charge of the operation, exploitation and organization of this window of peace open to the world.

7717

CSO: 3010

DIRECTOR OF NATIONAL BROADCASTING AND TELEVISION DISCHARGED

Guatemala City PRENSA LIBRE in Spanish 13 Aug 80 p 20

[Text] It was officially reported yesterday that newsman Mario Monterroso has been discharged from his position as director of national radiobroadcasting and television because of his clash with private advertising and radio organizations but not because he went to Russia for the Olympic Games.

When questioned on the subject, the Minister of communications and public works, Otto Arnoldo Block, said that Monterroso Miron's removal was a routine action ordered by the president of the republic.

He said: "I feel that with the new director, newsman Victor Manuel Chinchilla, we will have better harmony with members of private advertising and radio organizations operating in the country. These relations were not good because of Monterroso Miron's attitude."

In the Secretariat of Public Relations

The Secretariat of Public Relations informed us that this official had not been dismissed because he had traveled to Russia but because of mistakes in the service and discourtesy vis-a-vis the public.

Our source said: "The government of the republic, which firmly maintains a democratic system, guarantees the freedom of movement of every individual so that he can travel to any country he wishes.

"President Lucas," he emphasized, "also did not at any time call upon the Olympic Games Committee to refrain from participating in the Olympics in Moscow, in spite of foreign pressure.

"The president respected the decision of the Olympic Committee and even more so that of private individuals," the spokesman emphasized. "You can be assured that Monterroso Miron was discharged from his position for many irregularities in the service and not for having traveled to Russia."

The spokesman said: "Recently, in various communications media, paid ads were published in which radiobroadcasting and advertising organizations

called upon Minister Otto Arnaudo Block to pay greater attention to his problems, namely, those involving the director of national radiobroadcasting."

"The decision to dismiss newsmen Monterroso was made long before he traveled to Moscow," the spokesman concluded.

8143

CSQ: 3010

BRIEFS

TWO NEW RADIO STATIONS--Two radio stations will be set up in the north of the country to counteract the misinformation campaigns being waged in a neighboring country. The stations will be set up in [words indistinct], Nueva Segovia Department. These two radio stations will counteract the misinformation campaigns being waged by radio stations from other countries. One of the radio stations involved in this type of campaign is La Voz de Honduras. Sergio Ramirez, member of the Junta of National Reconstruction, has told this news program that the technical installations are already being made [words indistinct]. A member of the People's Literacy Army has said that at the beginning they had some difficulties in the department of [name indistinct] as a result of the misinformation campaign by the Honduran radio stations which are the ones that can be heard in that area. The literacy brigades played an important role in these border areas because they explained to the peasants the ideas that the enemies of the People's Sandinist Revolution were maliciously projecting. [Text] [PA231805 Managua Domestic Service in Spanish 0400 GMT 23 Aug 80]

CSO: 5500

IRAN

BRIEFS

TELECOMMUNICATIONS SYSTEM TO BE INSTALLED--The assistant director of the Khuzestan Telecommunications Department has announced that a new telecommunications system will soon be installed in the (Dash) region, about 40 km from the Ahvaz-Khorramshahr highway. [Text] [GF261550 Ahvaz Domestic Service in Arabic 1400 GMT 26 Aug 80]

CSO: 5500

BRIEFS

MICROWAVE TELEPHONE PROJECT--The National Communications Commission is studying a proposed bond offering. The revenues from these bonds--to be called telephone bonds--will be used to finance an extensive microwave project which the commission intends to implement at an estimated cost of 2 million dinars. The Jordanian Central Bank is expected to underwrite these bonds after the appropriate rules are set forth, and after modifications to be made to the telephone system are determined. AL-RA'Y has learned that marketing the bonds will be an ongoing activity. As such, a special administrative office will have to be established within the commission's financial office or in its traffic and investment bureau. The study, which is currently under way, will include an analysis of the details involved in issuing the proposed bonds with regard to the number of shares to be bought by applicants for telephone service, bearing in mind the pertinent differences between urban and rural subscribers. Thus, the study will include determination of a bond purchasing schedule: whether it will be at the time the application for service is made, regardless of the waiting period that follows; at the time the applicant is informed that his application has been approved; or at the time a definite order to provide service to the applicant is processed. The idea of issuing these bonds was taken from similar systems in operation in Japan and several other countries. [Text] [Amman AL-RA'Y in Arabic 19 Jun 80 p 1] 9123

CSO: 5100

COMMUNICATIONS ARTICLES FORWARDED FOR PREFERENCE

Press of Information

Yacouba CAMEROON TRIBUNE in French 17 Jul 80 pp 9, 12

[Article by Henry Bandain]

[Text:] The press, whatever its nature—written, radio, or television—and whatever its origin—of systems considered liberal or totalitarian—is disappearing, to an ever greater extent, a mounting amount of evidence as far as the impartiality of the information is provided. A number of studies conducted on the work methods of the mass media and their "obligations" toward the public and relations with the political and economic powers, and on the juridical status of press enterprises and journalists lead to the more or less pessimistic conclusion that nowhere is the press sufficiently free to fully meet the need and the right of the public to be informed. "In all likelihood, there is no country in the world where the press is really free if we mean by this total independence toward the two forces which are its thymus and hyaline: political power and money." In sum, the journalists are naturally accused of lacking objectivity in the extent to which they cannot provide "all the necessary information when necessary and as necessary." The latter, actually, do not defend themselves but answer that "the structures of the press, as, in fact, those of the radio and television, are such as not to favor in the least among the journalists an independent spirit and writing on their own level of competence."

Therefore, whatever the constitutional stipulations guaranteeing the freedom of information may be, there is a widespread public opinion movement according to which such freedom is more formal than factual. An ever growing public believes that the press, radio, and television will never tell it everything. Not only will they not publish all news but they will not tell everything about the news they have chosen to publish. Therefore, inevitably the public approaches information with an unfavorable prejudice. It is because of this crisis of faith that information

* Alfred Grosser, "Au nom de quoi?" [In the Name of What?], Ed. Seuil, Paris.

** Jean Schaeffer, "La presse se fâche et l'Argent" [Presses angry and Money] Ed. Seuil, Paris.

pluralism, through the confessions of its editors, should give the hope of representing the salvation of the freedom of communication.

Relative Ignorance

However, the public should not derive much profit from such pluralism. Americanistic editors do not allow themselves to buy all daily newspapers. The available time and reading habits usually restrict, on the other hand, the number of newspapers which interested people could read every day. A further major handicap is the generally low income in the developing countries. Therefore, the awareness of the mass media may occasionally make a change. As a general rule, these mass people read more frequently the same newspapers and listen to the news of the same radio and television stations. For the way in which information is presented is of interest to the people only in terms of the news and ideologies which they support. That makes it possible to say that "the citizens prefer to be exposed to news agreeing with their views. They actively look for elements which would reinforce their beliefs while avoiding news which challenge them."¹⁶ The press is naturally interested in maintaining such conformity. The content of a newspaper with a big circulation corresponds, in its structure, to the size total of the population: an approximately even percentage of workers, middle-class, and upper and clerical people. In order to attract and convince this public, the newspaper will provide the best possible means of information and communication which might divide, shock, or alienate a sociological or ideological fraction of the readership. The best way to proceed, therefore, is not to extend the required habits of respect and sense of ideology.¹⁷

Therefore, does the information structure of the public in pluralism totally lead the information structure to extend the news to be presented to the public? That structure could naturally separate from political contradictions without the latter being concerned in the words of the program of the political parties. These contradictions frequently reflect more the ideological, intellectual, or sociological boundaries within which the newspaper has decided to place his activities.

Furthermore, it would be impossible for a newspaper, even when it willing, to accommodate the daily flood of news which usually comes without process, a choice becomes necessary. Therefore, what is presented is emphasized and what is not is minimized. This is a political attitude, even though it may be based on the selection of news based on the morality, efficiency, or interest of the news as received to be presented to the public.

¹⁶ Janszfeldt, "The People's Choice."

¹⁷ Alfred Grosser, "The new journalism."

Pressure Groups

The public interprets the reasons for such incomplete and partial information in simpler and shorter terms: if the newspapers are not telling the whole truth it is because they are prevented from doing so by the political powers, the economic powers, the secular powers, and the pressures exerted by all sorts of moral, intellectual, tribal, etc., associations. It is obvious, in the eyes of the public, that the newspapers have always been censored and manipulated by pressure groups one way or another.

In reality, however, what would we really do and what could the journalists do? There will always be, everywhere, governments and assemblies. Therefore, there will always be political powers. There will always be money and people with the means to buy promotion or silence. Similarly, there will always be intellectuals struggling to impose their way of thinking. There will always be bishops and other patriarchs: there will always be groups exerting religious pressure as long as religions will be needed. And, as far as Africa in particular, there will always be, additionally, tribes.

Therefore, there will always be rather numerous and quite powerful pressure groups which would manipulate information or try to do so. They exist as permanent realities and are not the result of chance. They stem from the types of societies we organize for ourselves. Nevertheless, it would be rather shortsighted to adopt a view explaining the deficiencies of the press only in terms of the censorship exercised by pressure groups.

"Attaining the Truth"

In order for the press to be able to provide all necessary information when necessary and properly, as one would wish, and in order for it to tell the truth, the journalist himself should have the means to be informed, to have access to the truth. The first rule of the journalist is to be accurately and totally informed, and to publish his article only after methodical and thorough verification of the facts which he presents to the public. The search for the truth, as for information, is based on the same intellectual mechanism: verification. Authentic and true information is the result of a critical investigation: One refers to several cross-checked sources. One undertakes comparisons to see differences and similarities. One looks for confirmation and denial in testimony or that, finally, one may be able to deliver the firm proof of the truth of facts of which the public will be informed. Naturally, the journalist must have free access to official and private sources of information.

However, is the public aware of this systematic search? Does the public know what it wants a newspaper to look for the truth? It seems that the public waits more eagerly sensational revelations, judgments, condemnations, exonerations, or rehabilitations.

Western journalism, however, is a journalism which is based on extensive research. It is this extensive research, unfortunately ignored, that gives birth to the truth which is the only one capable of forming more accurate and more objective views through interviews and comments. If basic information is distorted it has only lead to persistent distance from the truth and to shaping erroneous views.

However, today there is no newspaper which does not pay. The search for truth is primarily the most important. Having at one's disposal an information system is not everything. In order to enable it to fully fulfill its mission, it must have the effective means for informing itself: a number of correspondents linking it to the main local and world news agencies, a network of correspondents and reporters, local and foreign, a permanent team of reporters and competent journalists, the ability to send special correspondents at all times to places where events are taking place, both domestically and abroad, numerous and complete reporting facilities, a network of communications such as telegrams, telephones, portable radios, etc., which would be quick and efficient, fast and safe transport facilities, a network of numerous and varied contacts in the country and abroad, etc., etc. All this must be paid for, and the price is very high.

The Suez Affair

The example which must be used for purposes of illustration is that of the famous Suez Suez affair in the context of his dealings with the Suez-Suez Suez Suez Suez. But we must not forget with which the African public followed this affair. The African press, with understandable passion, took up this question which, while it lasted, was the subject of extensive coverage.

It is reported that Suez Suez was very generous, and Suez paid for the extraordinary services he had given to the Suez-Suez Suez Suez Suez, and that he was asking for a variation of his position. This was refused. The journalist, therefore, could begin to extrapolate as to the conditions of Suez Suez in Suez.

It was also written that Suez Suez, young and intelligent, had fallen into the hands of a Suez which could not forgive him for having his eyes opened and discovered the Suez.

Yes, since Suez Suez did not have only friends in Africa, whose newspapers carried articles such as "Suez Suez, the Suez Suez, who had become a Suez Suez, a Suez Suez, a Suez Suez, drinking only of filling up his pockets, etc., etc." The conclusion was that he deserved this because of his lack of patriotism which had led him to leave his country which, actually, had made him a Suez.

In the final account, the Suez Suez affair came to an end without the African public having understood what had really taken place. In any

case, there were few Africans on the continent, then interested in the matter, who would be able to this day to trace the real origin of the conflict which developed between Salif Keita and the managers of the Saint-Etienne Common Fund.

This affair provides a sufficiently good illustration of the drama of the poorly informed journalist and of its consequences to a public eager to form a just opinion. In truth, all our journalists had were a few bits of information. They know, more or less, the following: "Salif Keita was quarreling with the management of the Saint-Etienne Common Fund. There was a trial and Salif Keita lost. Salif Keita left the Saint-Etienne Common Fund." This was totally insufficient as a basis for serious comments on the part of the journalists or for enabling the public to form an accurate opinion.

A Justly Process

Let us consider the hypothesis of a serious newspaperman concerned with the truth. He would like to know why Keita clashed with the Saint-Etienne Common Fund. Why did Salif Keita blame the Saint-Etienne Common Fund management?

What were his reasons? How well substantiated were they? Unless it was a case for the management of the Saint-Etienne Common Fund that formulated charges against Salif Keita. What were these charges? Were they based on a contract? And why the trial? Why also did Salif Keita lose the case? Etc., etc. The answers to these essential questions take us far closer to the truth of the Salif Keita-Saint-Etienne Common Fund affair.

Naturally, one could rest on the information supplied by Agence France Presse which benefits from the favorable prejudice of being most able to inform the French-speaking countries of what is taking place in France. Yet, there is no assurance whatever that such information would be sufficient, complete, and accurate. Even though the general rule of Agence France Presse is not to "tell stories," how could we be sure that the information it provided was not slanted?

What would be necessary, therefore, having access to the dispatches of Agence France Presse on the matter, would be to compare them with the statements of the other news agencies such as Reuters, UPI, Associated Press, TASS, etc. This does not resolve the problem, particularly if the information provided by these different news agencies vary, or were even conflicting. Subscription to the services of a news agency costs several tens of millions.

Yet, working exclusively with news agencies which provide at the same time identical information to all their subscribers throughout the world, does not necessarily provide a newspaper with exclusive information, this

"privacy" which means only the privacy and the anonymity of a newspaper. Consequently, it becomes necessary to identify informants, however, and even this is sufficient evidence, but it may happen that the day that the Salif Keita affair came to light, the principal agent of the involved country may be visiting Paris (he talks with his French counterpart) and that the same day a national assembly may gather in Bamako. It is obvious to the newspaper that its French correspondent, if alone, would be able to cover only one of the above events of interest to the newspaper. If he resides in Paris, at the request of his newspaper, he will have to rely on information coming from Salif Keita to find out the truth on the Salif Keita affair, and on other informants in Bamako to obtain news on the performance of the national assembly, while he himself will be covering his share of the duty of news in Paris. Information at will would be a great deal.

It Does Not Take Much

Let us add to this that in order to obtain all such necessary information, the correspondent and his informants will have arranged for meetings which will be sometimes lengthy or delayed. One pays for such meetings as well. And, often as a result of someone who can be contacted by telephone contacts, and after a long and not as easily travel, the journalist has been finally lucky to find the person who could supply him with the information he needs. He is frequently able to obtain some information only at the cost of a bottle of champagne or a good meal, paid by the newspaper. Generally speaking, the result is one of that great should the information refuse to open up. Then one must go further. Once the correspondent and his informants believe that they have gained a sufficient number of elements, all this must be sent to the journal by telephone, Telex, satellite, etc., and even then the work is not finished. At the newspaper the dispatches are examined by a committee of journalists who break the material down in a variety of ways and check the files for dates, figures, and quotations. They separate the certain from the uncertain. Finally, one of the editors is assigned the writing of the article so the final is here considered as accurate as possible. Once the article has been written, many editors assume necessary: A judge may be contacted by telephone for an interpretation of a specific legal point. A telephone call goes to the president of the Mali Soccer Federation to find out his viewpoint and complete the article with his comment of the story; a call is placed to the president of the French Soccer Federation for the same purpose. Then one president of the other federation of some other country is asked what would have been his reaction had a local soccer player found himself placed in Salif Keita's situation, etc.

In order to spell the news right the foreign correspondents or informant will be called for the spelling. It is only then that the editor in chief will be able to sign on the article "for distribution or posting."

After all this, the article would cover no more than one page: a few minutes of reading or listening if it is on the radio. One can imagine, therefore, what all this research at such a distance would cost to a newspaper for which sports is not the only area if it is to shed light on the Kelta matter for the public of an African country. Assuming that the newspaper would practice the same method based on its concern for the truth for all political, economic, and cultural information, one may understand why the price of a newspaper would be unrelated to production costs.

"Money Goes to Money"

Actually, the more money a newspaper has, the better it is serviced and the better its information becomes. The better the information is presented the more readers it will have and, therefore, the better it will sell and increase its income. The more it is read, the more it will encourage businessmen to advertise in it. The more businessmen want to advertise in it the higher advertising rates become. The more funds the newspaper has, the better it will become technically, pay better its journalists, and hire more competent ones. The more numerous and competent the journalists are, the better will be the quality of the articles be and the broader the readership will be, thus drawing in more and more money.

Since they depend on money to be able to supply quality information, do the newspapers lose their independence toward the sources of such capital? Freedom of information would not simply mean that the information media are not under the control of the political powers and that they represent a political counterweight to them. The defense of the consumers is a social responsibility which the mass media should assume entirely. Yet, how to protect the public from a product advertised and how to retain the advertising contract which is important to the financial health of the newspaper? Could a newspaper not be more concerned with its financial health than the physical, moral, and material health of the public?

What should be emphasized here is that, in addition to its social function as a public service, the press is also an industrial and commercial enterprise which requires substantial investment capital which it needs if it is to provide quality information.

The complexity and the rapid development of manufacturing and dissemination techniques, and the ever-widening range of competence of publications with a wide circulation, forced to adapt themselves to the new needs, knowledge, and range of interests, require of the newspapers to meet huge financial costs the compensation for which is far from being obvious because of the perishable nature of the product and the uncertain market situation. The press uses moral arguments to resist such pressure but it cannot insure materially its survival without substantial financial means.

We may see, therefore, that whereas the political constraints imposed upon the African press may not always be questionable, some African periodicals die more frequently as a result of financial strangulation in socioeconomic conditions which prevent them from developing. This is one of the reasons for which UNESCO has recommended, among others, to the African states, that they be concerned with the economic situation of the newspapers by reducing their great and fiscal charges which substantially increase their production and distribution costs. This is a financial sacrifice requisite of the status provided through indirect aid on the part of the national groups to favor the development of information without compromising the freedom of expression of the press.

Third World Informative Heritage

Yaounde CAMEROON TRIBUNE in French 18 Jul 80 p 1

[Article by Ndimbiyemba Rakumbi]

[Text] It was in the report of Commission I in charge of examining "the emancipation of the mass communications media in nonaligned countries," in the course of the symposium of nonaligned countries, held in Tunis from 26 to 30 May 1974, that the notion of a "new international order in matters of information" explicitly appeared, for the first time, as follows: "Since information in the world shows an imbalance which gives privileges to some while ignoring others, it is incumbent upon the non-aligned and the other developing countries to change this situation in order to reach a democratization of information and develop a new international system in matters of information."

In the wake of the demand for a new international economic order, formulated in 1974, the development of a new international order in the field of information is seeking to meet a concern for the "rebalancing" of information between north and south, noted in 1973 in Algiers, in the course of the conference of nonaligned countries. In August 1976, at their Fifth Conference in Colombo, the nonaligned countries acknowledged that a new international order in the fields of information and communications is as important as a new international economic order. At that point they formulated the priority requirement of putting an end to the dependence of the Third world on the industrialized countries in the field of communications and strongly demanded the organization of relations of interdependence and cooperation in matters of communication; the abolishment of communications monopolies and of the measures developed during the colonial period; correcting the inequalities in the circulation of information toward and from developing countries; contribution to the implementation of the principles of the United Nations, particularly those of peaceful coexistence, respect for the sovereign equality of nations, and their right to self-determination and noninterference in the internal development of other countries.

Government Control

Yet, however necessary and indispensable it may be within the framework of new international relations, the new world information order can be substantive only if it is preceded by the organization of a new order of communications within the Third World countries. Considered as a development tool, information in such countries is frequently subordinated to the almost systematic guidance and control of the political and administrative powers. For, "the concern of the governments is to maintain national stability. . . . The information media have been assigned to protect the good image of the leaders whose actions and motions are extensively discussed, to justify their actions, and to mobilize the masses to praise the national feelings. . . ."

In general, the first and last purpose of information in Third World countries is (in theory) to help to enhance national awareness, mobilize the energy for national construction, the preservation of unity and peace required for development. Yet, how to rely on the media to mobilize the national energy if the populations question the sincerity of their message?

The reality is that in a number of Third World countries information, whose real power is well understood, is accepted only to the extent to which it connives with the political powers and plays the game of the ruling system. This concept and practice of the information media inevitably breeds mistrust in and scorn for the journalists.

Secondary Information

In the case of information coming from the authorities, the mistrust for those providing it is shown in the difficulty to reach the information sources, the fear of the journalist, and the ambiguous view of journalists themselves. This is why rules governing the profession are frequently quite broad to the point that everyone begins to act like a journalist depending on circumstances. Despite the fact that some countries have schools or higher institutes for the training of journalists and, therefore, of information cadres and technicians, this job is still entrusted to people with no technical knowledge whatever. All in all, information does not seem to be as yet considered as a technique with specific laws and regulations, to be handled by specialists.

Considering, for example, the role it plays when the state budget is drafted, it would appear that information is not, in fact, an essential concern of the leaders of the Third World. One understands, therefore, the importance of the statement made by Walery Pisarek, director of the Polish Institute for mass media research: "In the struggle for a new international economic order we should take into consideration the fact that the information system, both national and international, becomes secondary in terms of the social, political, and economic systems."

Neglect of this truth would easily lead to idealistic illusions according to which information alone could change the world. . . ."

In a word, before being considered a weapon in the battle for a new order in international relations, information should gain a certain status of nobility within the national systems.

As to the scorn expressed occasionally for a journalist, it may be the result of the fact that the public quite well realizes that those who provide information can only be their master's voice. This twin feeling of mistrust and scorn was well summed up by Herve Bourges: "In Africa the newspapers are not always credible because of the attitude of the governments and administrations which are instinctively mistrustful of the press and, by this token, encourage the journalists to avoid any initiative or responsibility in the exercise of their craft. . . ."

Is it astonishing, under such circumstances, that African journalists dream of abandoning their profession at the first possibility?

Local News Is Scarcely Gathered

If today the leaders of the Third World are denouncing the activities of big foreign news agencies and press groups, Western in particular, is this not because, above all, they have failed to carry out their real assignment with which they had been implicitly entrusted, i.e., to be used as a filter, a channel, a select or, in a word, to censure the information aimed at local consumption?

It is as though the imperatives of development required a bound, a tied information. Investigations of the sector prove that the rule of the kilometer-long death (*loi du mètre kilométrique*) equally applies to the Third World. Yet, it is precisely the local news demanded by the public at large that is most frequently lagging in the national information organs, written or spoken. Except for information on the activities of officials, news on the daily life of the country is scantily gathered and disseminated. . . .

In order to obtain local information one must turn to a foreign station. Naturally, quite frequently the local daily newspaper will not even mention such news unless it is done later, presented as an official brief communiqué issued in order to deny "erroneous information from foreign sources" which, generally, has the opposite results. The local newspaper gives priority to foreign and sports news handled with greater conviction and feelings.

Therefore, "Why not listen to foreign radio stations or read foreign newspapers? Why buy the 'Big National Daily'? Why be interested in a newspaper which does not carry any discussion which might generate new ideas, emulations and, therefore, progress? Why would a Third World journalist,

an employee, be concerned with his own advancement and the improvement of his newspaper? Whether or not the newspaper is of interest to the reader, whether it is profitable or not, the journalist's monthly salary and professional status will not be threatened as long as he does not make trouble. . . .

Neither Competitive Nor Credible

Therefore, we should not look too extensively to find the reason why foreign publications and stations enjoy a big audience in our countries and, therefore, the reasons for the stagnation and the great misery of local mass media. They are not as competitive or credible as one might wish. One could not claim, without becoming ridiculous, that the present information system is the main culprit for this state of things. Actually, is it not paradoxical that at a time when the governments of the Third World zealously call for the organization of a new world information order the readers and listeners of such countries eagerly seek foreign publications and listen more and more to foreign radio stations? The explanation for this situation is simple: Such foreign radio stations and newspapers enjoy among them the double favorable prejudice of credibility and freedom. Such are, therefore, the measurements for the new clothes that the information system imperatively must wear in the Third World: credibility and freedom, while reserving the specific line of information and development. The advent of a new international order in the field of real communications must necessarily run through this change in the national information systems in the Third World.

African Radio Broadcasting

Yaounde CAMEROON TRIBUNE in French 22 Jul 80 p 4

[Article by Henry Bandolo]

[Text] Considering that African television is feeling its way and is trying to find itself, and facing a written press still severely handicapped by socioeconomic factors, radio broadcasting in Africa remains the most effective mass communications medium. The primacy of African radio broadcasting has made it one of the privileged instruments of national development policies in Africa. In order to insure the efficient performance of their mission as "development agents," African radio broadcasting systems must, apparently, make further great democratization efforts in order to spread their message among the masses.

A Question of Means

It must be realized that in the African countries underdevelopment is itself a "state of emergency" which justifies the mobilization of human and material resources. Within this context information should be the beneficiary of an equal amount of investments as education, health, and

armed forces. Actually, it is not unusual that the military budgets of most African countries, even though understandable, contribute more to the development of these countries compared with information. Even though national defense may be a necessity, the populations should be suitably educated to approve the funds allocated and to participate.

Except for state subsidies, the African radio broadcasting systems should develop conditions for their self-financing. The means for such self-financing may be found essentially in the use made of the advertising income. As a public institution and as a public service, the radio could and should promote an advertising ethic. It would set the rules consistent with the needs of the market and with economic imperatives, as well as with social requirements and a hierarchy of values. As it is currently practiced by the African radio broadcasting networks, and because of high advertising rates, advertising seems to be profitable only to big enterprises quite frequently with foreign majority ownership. Generally speaking, this applies to enterprises which enjoy a virtually monopolistic status. They need publicity less for the sake of promoting their goods than for reasons of prestige. Their economic survival does not essentially depend on such advertising.

The Voice of Small and Medium Enterprises

The small and medium enterprises which are needed for the stability and dynamism of the economy, midway between big capital, the peasantry, and the crafts, are penalized by the system, unable to pay the fees for a sustained advertising campaign. The current advertising rates prevent this essential sector in the economic life of African states to become known and, eventually, could lead to the abandonment of a number of interesting and necessary initiatives. Added to these economic considerations are others related to possible choices among types of societies and moral and cultural values which African societies intend to protect and which would prove to be incompatible with some types of advertising or advertising procedures. All in all, by earning substantial income from advertising, the radio broadcasting organizations, in charge of providing a civic education focused on development concerns, could, at the same time, protect, to the extent to which this is still possible and necessary, the African societies and their intrinsic values from a number of alienating distortions resulting from the technolindustrial consumption age. Therefore, such income should be used for the implementation of the major political, economic, and social plans of such radio broadcasting organizations considered as "missionaries for national development." Such income should allow the financing of regular or sustained radio broadcasting campaigns: struggle against major epidemics, hygiene and public health campaigns, boosting agricultural production, disseminating among the masses the major governmental opinions and orientations, promotion of arts and literature, literary campaigns, etc. These and many other activities could be taken up by the African radio broadcasting systems and carried out effectively if their earnings would be entirely

left at their disposal, but to mention the fact that they could just as frequently as necessary renovate their technical facilities and improve their operational conditions.

Functional Methods and Structures

Until recent years, in order to compensate for the shortage of communication technicians, the African states have encouraged the training of journalists. They have neglected the fact that information is less an individual than a collective matter, and that the quality of those who provide it depends, partially, on their talents and their training but also on the effectiveness of auxiliary newspaper services: management, producers, or librarians. Even though obscure, such functions are essential. The management of a press enterprise and, particularly, of a radio broadcasting system, is a specific area suited to the fluctuating, varying, and unseasonable nature of information, caused by the fortuitous, changing, and frequently unpredictable nature of events. A conventional management, exclusively concerned with procedural matters, proves to be imperative in a medium which is so basically variable, unstable, and versatile.

The effectiveness of an information system depends on its ability to quickly react to all types of most unexpected events at every moment of daily human life. It can only be harmed by the tortuous channels of uncertainty and steady management. Consequently, the African radio broadcasting systems should acquire sufficiently flexible structures which would enable them to adapt to the daily requirements of speed and ubiquity. On a corollary basis, the African governments should make possible the training of people specializing in the management and administration of press and radio and television enterprises in order to make sure that "independent management" would not necessarily lead to financial anarchy or to irreparable waste.

A Language Adapted to the Sociocultural Environment

An educational system based on the primacy of foreign languages, combined with major information media such as the radio have deprived the African elders and their seconds of their monopoly over the dissemination of culture. In the past, such seconds were the counselors of kings. They had summarized the constitutions of the kingdoms; each princely family had its second in charge of the preservation of tradition. It was among such seconds that the titans selected the teachers of the young princes. Since there were no archives, the second was in charge of the customs, traditions, and principles of government.² Radio broadcasting which disseminates information and culture among the masses could bring back to life the old

² Olibrii Tamsi Niane, "Soudjata," in *Presence Africaine*.

which something more, in this sense, would be well-wished for. The use of foreign languages would not necessarily be a cultural failure providing that there is change or communication which would make an effort to bring such languages closer to the everyday life of the population. Actually, there is a "relaxation of anxiety, language, language and the public: To speak a language means to adopt a specific world and culture."¹⁴

The languages themselves from the colonization period would be adapted to the African conditions of expression in order to show original features. Pronouns, verbs, tenses, adverbs, and particles play an important role in African oral literature and have meaning and value. Journalists who must communicate with information in foreign languages would frequently and unfortunately use a language with the names of the nations. A split develops between them and their public when in neither identical assimilation, adaptation, and assimilation, nor a transmission of the symbols of the world or an untranslatable community of culture, civilization, and identity"¹⁵ is recognized their community. Consequently, in addition to the official languages used as a political option or for assimilation purposes, the African writer should make proper use of the indigenous national languages, considering that the African population will contain large numbers of illiterate men and women. In effect, the choice of such "official foreign languages" rather than the belated process of more dissemination with different meanings for writers to prevent the loss of culture and the disintegration of the populations. Similarly, the exclusive use of local languages, even though it quickly reaches big population masses, calls for the development of corresponding cultural materials. The African languages are not always able to do so and, in fact, in the perspective of the development of a national awareness requires the breaking of windows to a language with the arrival of development - technological log which such a native would deny. The real problem is to ensure the coexistence of foreign languages, treated as official languages and, consequently, as languages for communication, and the multiplicity of national languages spoken within some African states.

The Cameroonian Option

The Cameroonian has about 250 ethnic groups which speak at least 150 dialects in a country of only 475 million inhabitants spread over some 475,000 square kilometers. It is obvious, therefore, that under such circumstances the use of multiple languages would be impractical.

Those in charge of public administration in Cameroon, aware of such realities, have chosen a linguistic formula. The use of "bilingualism." It is no longer a question of privileging or deprivileging languages in accordance

¹⁴ Frantz Fanon, "Black Skin and White Masks," Paris: Seuil.

¹⁵ Thomas Kuhn, "Opening Lecture, Yenching University, December 1962.

with a more or less studied order of succession, but to use the local languages on the basis of a functional hierarchy, taking into consideration their national or regional impact.

This functional hierarchy give radio broadcasting in Cameroon a greater social impact. It is based on a "blanket coverage" of the nation -- territory, using powerful emitters which broadcast programs written in the two official languages. However, it is also based on the creation of broadcasting facilities of low or medium-range and of regional production centers operating in accordance with means and requirements, interconnecting either among each other or with the national transmitter. This system of regional stations "will make it possible to add to the national dimension a local dimension, expressing ethnic concerns, using vernacular languages, and covering basic realities."² Nevertheless, the choice of languages and the production of programs as well as the choice of the sectors presume that African radio broadcasts will undertake as frequently as possible surveys among listeners however expensive they might be.

Without meeting these conditions it would be impossible to determine the effectiveness of radio messages. It is only thus that it would be possible to combine the national imperatives with the needs of the public for having programs tailored to its likes and which would also contribute to the social impact of the educational or political message.

Competent and Responsible Radio Personnel

A discussion on the value of journalists, based essentially on their university or professional training, would be useless. Experience has shown, in any case, that good journalists may be found equally among those who were essentially trained on the job, without even a high school graduation, as among young people who have had a classical university training without having ever gone through journalism school. The diploma of a school of journalism, however prestigious it might be, is not necessarily a quality label as to the professional and moral worth of its owner.

This is to say that in this age of sheepskins journalism remains one of the rare professions in which all diplomas could prove valuable and where, at the same time, no diploma is required. The universal nature of knowledge transmitted through the press quite properly leads to the fact that journalism is a profession open to all types of competence, to all talents, skills, and imaginations. Journalism does not require any specific qualification other than all qualifications. "One enters journalism like one joins the army through the polytechnical institute;

² Robert Estévez addressing the 13th Congress of the UJAF (International Union of French Speaking Youth) in Abidjan.

Saint-Cyr, of Saint-Martin. . . . by my riding through the ranks."⁸⁸ "In our time of extensive specialization, there are only two professions which require neither diploma nor experience: politics and the press. The former determines the fate of mankind while the second molds public opinion."⁸⁹

Nevertheless, we must emphasize that the leading role played by information is absolutely inseparable from information itself.

The opening of a mind to curiosity, novelty, knowledge, and the very lessons of life, provided on a daily basis by the information media, through the news they collect and present, is a direct purpose of information. It is what that Alfred Grosser can simply state that to inform means to educate.⁹⁰

Consequently, the adaptation of the profession of journalist must follow a rigorous selection so that the handling of the truth and its dissemination among the public is in the hands of competent people. Justifiably, Jean Schorschel believes that "the profession of journalism requires an ever greater amount of qualifications and exercises. In a world in which the accumulation of progress has caused an upheaval in all areas of human activities, and in which the generalization of education is steadily enhancing the level of knowledge among the public, the journalists today must acquire an ever greater possibility of understanding the major specialities in all fields in order to be able to transmit clearly to the readers their news and their dissemination, and the importance of the latter."⁹¹

The political, economic, social, and human problems facing the African countries are too numerous and complex for the responsibility for information to be entrusted to people without adequate knowledge of them. This situation demands of the journalists solid knowledge of national, historical, political, economic, and sociological realities, along with a general cultural sensitivity as extensive as possible, from which they would be able to draw adequate references, on a daily basis, to supply the public with a clear view of the issues in which they are pursuing its interests.

* Joseph Follet, "The Small and Big History of the Fourth Power," "African Star" April (To Ask, Don't Know), Ibadan, 1961.

** Albert Monod, "Fictions and Anticipations," A Dictionary.

*** Alfred Grosser, "Au nom de quel?" BA, de Neuch.

**** Jean Schorschel, "Le métier de journaliste," BA, de Neuch.

The Dangers of Transposition

The real and dangerous temptation in terms of the African press and population faces the African journalists: transposing to their own countries the framework of a style of information used in developed countries. They frequently forget that there is no identity of structure, content, or even nature. It is not certain, as a matter of fact, that the style known as "liberal" information, which emphasizes sensationalism to the detriment of the essential social function of providing information would be better suited in promoting the emancipation of African societies. Conversely, censorship and self-censorship, in promoting the development of one-sided information, block dialogues, initiatives, physical and intellectual energies, awareness of realities, and activities and efforts needed for development.

The ambition of the Africans is certainly not to reproduce in their own countries the development models of industrialized countries. They neither have the means to accomplish this nor would it necessarily be the best choice. Objectively one may be fascinated by the living standards and technological level reached by Western societies while rejecting, nevertheless, a situation in which the satisfaction of needs proceeds to the detriment of life itself. The African journalists have the right and even the duty to develop for themselves original facilities for expression which would enable their publics to progress in their own civilization. This is a responsibility with heavy implications which rejects models which, having proved their value in the European West and East, but which, tried, have not developed a hold on specific African realities.

5138

CONFIDENTIAL

COMMUNICATIONS MEETING ANNOUNCES CREATION OF NEWS AGENCY

'PANA' Created

AB311345 Paris AFP in English 1147 GMT 31 Jul 80

[Text] Yaounde, Cameroon, 31 Jul (AFP)--Delegates from nearly 50 states conferring here on communications policy in Africa have decided to create a PAN-AFRICAN NEWS AGENCY (PANA) as soon as possible as part of a series of measures aimed at preparing the coming of a new order in communications in the continent.

The African 80 conference organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) yesterday also recommended creation of a fund to promote culture and develop communications and information in Africa.

Delegates called on each country to give priority to interstate telecommunications systems to facilitate the movement of information, and asked UNESCO and the International Telecommunications Union (ITU) to create or strengthen the telecommunications industry in African states.

They also recommended creation of an African higher education communications institute aimed at training top level staffs, establishment of a pan-African publishing house, and the setting up of regional film production and distribution systems.

The week-long conference which ends today further called on UNESCO to provide financial and human resources to develop rural communications, and for the development of traditional communication forms and the promotion of African languages.

Delegates also decided to call a special conference about non-African radio stations whose presence in the continent embarrasses national radios.

Speaking at a news conference here yesterday on progress towards creating the news agency, its director Cheick Diallo said PANA was going to have a solid and reliable telecommunications network.

A team of experts is examining the transmission facilities and communications infrastructures of member states and will present a detailed report on established equipment in September, he said.

Mr. Diallo added that the movement of news and information would come following fixing of a quota of news to which each member state will have a right in order to assure an equal participation, the sole means of guaranteeing the different partners.

FOR THE AFRICANIZATION OF THE MASS MEDIA, THE CONFERENCE IS CONSIDERING THE DEVELOPMENT
OF A SYSTEMATIC APPROACH TO THE MEDIA WHICH WOULD BE BASED ON THE PRINCIPLES OF
INDEPENDENCE, AUTONOMY, DEMOCRACY, PLURALISM AND FREEDOM. MR. DUBOIS SAID,

PANA WAS ALSO CONCERNED BY THE NEED FOR A STRONGER REGIONAL PRESS SYSTEM;

MR. DUBOIS SAID: BY WORKING TO REDUCE THE MONOPOLIZATION, DOMINATION AND THE
IMPERSONALIZATION OF NEWS, THE PRESS WILL PROVIDE A VITAL AND RELIABLE SOURCE OF NEWS;

HE WILL ALSO BE ABLE TO PROVIDE INDIVIDUALS WITH A COMPREHENSIVE VIEW OF THE WORLD
IN WHICH THEY LIVE AND WHICH WILL BE ABLE TO PROVIDE THEM WITH THE MOST RECENT INFORMATION;

Meeting Ends

AFRICAN Knowledge Institute Service in English 1971 OCT 31 Jul 88

[Text] The 10-day UNESCO-sponsored intergovernmental conference on communication
policies in Africa has ended after unanimously adopting a Declaration on Communications
in Africa.

The participants to the conference also adopted a final report on the proceedings of
the meeting. The staff reporter, George Ngau, was there and now fills in the details.

[George Ngau reports:] The final declaration adopted at the end of the conference
is a comprehensive policy paper on culture and communication in Africa. It seeks to
resolve with African member states of UNESCO to develop communication structures
which often still conform to old colonial patterns and not to the needs and aspirations
of the African people. More important is the realization by participants of the urgent
need to give higher priority to the regulation of global integrated policies in the
field of culture and communications, to the establishment and expansion of infrastructure
for the exchange of information and cultural life and to the indigenous production of all
kinds of messages and cultural [products].

The participants expressed the need for a new conception of freedom of information such
as new [words indistinct] policy instead of submission them to the conditioning of those
who control the powerful communication media. The participants stressed the importance
to increased access to information for the rural areas to guarantee freedom of information
and to improve working conditions [word indistinct]. They deplored the dearth of bilateral
and multilateral help for the development of communication in African countries and
[stated] that collective self-reliance which is based on increased confidence in [former]
parties and on its capacity for innovation, remain the only way to African development.
In this work, representatives have formed their collective will to work for changes called
for by the present world situation.

They declared their preparedness to cooperate with all who are willing to correct the
imbalances and historical dependence under which Africa is suffering in the information
and communication spheres. The participants appealed to UNESCO and other bodies and
agencies of the United Nations to collaborate in establishing a new communication and
information order such as would allow complete self-fulfillment to all peoples in peace,
justice and freedom.

The adoption of the Yaounde Declaration was followed by a speech from the director general of UNESCO, Mr Amadou Matar M'Bow, summarizing the proceedings of the conference. He lauded the spirit in which discussions were held and praised the determination shown by delegates to stand for a united front for the quest of a new rural communication order. Mr M'Bow said the discussions demonstrated that Africa has left the era of [word indistinct] slavery and called on participants to examine with great care the resolutions adopted with a view to their speedy implementation. He ended by presenting a UNESCO silver medal to Mr Guillaume Bwele to reward him for what he described as an important contribution to UNESCO's activities, especially to the success of the Yaounde conference.

In the motion of time that followed, the Algerian delegate on behalf of members of the other delegations, thanked President Ahmadou Ahidjo, the government and people of Cameroon for the warm hospitality accorded participants. Cameroon's minister of information and culture, who is chairman of the conference, Mr Guillaume Bwele, in his closing remarks said a great lesson should be drawn from the meeting because it has a proportion of the [word indistinct] associating categories, especially the rural masses, in the development of communication infrastructures. [end recording]

CSO: 5500

BRIEFS

RADIO RECEPTION TO BE IMPROVED--The government is to spend 200 million shillings to improve the Voice of Kenya Radio reception in all parts of the country. This was said yesterday by the minister for information and broadcasting, Mr Oloo Aringo, when he addressed a leaders meeting at the Kilifi County Hall. The minister said when the installation of the new booster station is completed, radio reception will be clear and this will discourage Wananchi from tuning to foreign stations. Saying that Kenya was always ready to foster goodneighborliness, Mr Aringo added that the government was concerned about the habit of some Kenyans switching to foreign radio stations which, in most cases, beamed anti-Kenya news. The minister said the government will introduce rural newspapers in more undeveloped areas of the country to enable Wananchi in those areas to exchange information freely on their own culture and be able to know the development already achieved in their areas. [Excerpt] [LD031150 Nairobi Domestic Service in English 0400 GMT 3 Sep 80 EA]

CSO: 3500

UNESCO COMMUNICATIONS OFFICIAL ON FACT-FINDING MISSION

Victoria NATION in English 13 Aug 80 pp 1,

[Text]

BROADCASTING in developing countries exists primarily as an instrument for development and as a vital tool for education, unlike in the industrialised world where more often than not, it is essentially a "support" for advertising.

This is the view of Mr. Alex Quarmyne, UNESCO's Regional Advisor for Communication in Africa and a noted authority on the development of broadcasting in the Third World, who is now in Seychelles on a fact finding mission.

Mr. Quarmyne said that developing countries cannot afford to set up a radio or television service just to serve the commercial interests of businessmen or the Government as is done in the developed world. Rather they do so only if it will serve the society — which is a lot more than just providing support for advertising.

"All developing countries — and I find no exception — indicate they are going into broadcasting because they feel it will be beneficial to the whole country and it is this theme that UNESCO supports strongly", said Mr. Quarmyne adding that unfortunately, developing broadcasting systems sometimes go astray somewhere between the ideal and the implementation.

The effective use of broadcasting to achieve these ideals requires a lot of planning, hard work, and trained personnel. Mr. Quarmyne stressed.

On the other hand, although there is a common objective generally and all technical aspects of broadcasting are the same everywhere, broadcasting systems must vary from country to country. The applications to which broadcasting is put in any particular situation can

Mr. Quarroyne be transplanted into another situation.

"One can pick up the technical aspects which are universal, but once you transplant broadcasting systems, you end up with a broadcasting operation which in most situations will fail to serve the broadcasting requirements of that particular society," he said.

As part of UNESCO's programme for world communication, the organisation is trying to be as active as possible where the Third World countries are concerned. However, said Mr. Quarroyne, there has not been enough research in this field as far as data for the practice, requirements and guidance of broadcasting compared with the highly developed western systems. A lot more research needs to be done and advisory material written.

Mr. Quarroyne has had talks with the Minister for Education and Information, Mr. James Michel, and senior officials of the Information Services.

Explaining how UNESCO could help Seychelles in the field of information if the country so wished, Mr. Quar-

royne said that when UNESCO provides technical advice for the development of all sectors of the media, from newspapers to films, if necessary it seeks co-operation and expertise from sources outside UNESCO to provide the most suitable assistance, advice and equipment required.

UNESCO is also prepared to provide training for both experienced and new staff if the Seychelles Government wishes. All assistance is based on the needs and policies of the client government.

While here, as well as finding out about the country's broadcasting organisation, its radio agency and problems, Mr. Quarroyne is also looking into ways UNESCO could co-operate with Seychelles in the further development of its communications and mass media system.

Mr. Quarroyne, a Ghanaian, has the credentials to back his statement, having spent 25 years in the business. He has written several books and lectured on broadcasting in the Third World. He has been with UNESCO for the past 17 years.

He is expected to leave Seychelles this week.

BRIEFS

TELEX CIRCUITS--Khartoum, Aug 11, (SUNA)--Work is currently underway for the installation of telex circuits between Sudan and the Kingdom of Saudi Arabia through Port Sudan-Jeddah microwave. The said telex circuits that will operate after the Ramadan Bairam feast, involve two circuits between Khartoum-Riyadah, two circuits between Jeddah-Khartoum and another two circuits between Riyadah-Port Sudan. It is to be recalled that three hand telephone circuits are already operating between Port Sudan-Jeddah, Jeddah-Riyadh-Demam in addition to another three circuits between Khartoum-Jeddah and Riyadh-Demam. [Text] [Khartoum SUDAN NEWS AGENCY BULLETIN in English 11 Aug 80 p 4]

CSO: 5500

ZAIRE

BRIEFS

KOLWEZI TELECOMMUNICATIONS STATION--Kinshasa, 3 Aug (AZAP)--On Sunday, the secretary of state for posts and telecommunications, Citizen Mwamba Mukukwila Ngoy, presided over the ceremony of inauguration of the telecommunications earth station of Kantonto, Kolwezi, in the presence of that town's subregional commissioner, Citizen Mazangu Malanda Ma Mongo. In his inaugural speech, Citizen Makela Ma Mpukuta, the director of the Rezatelstat project, said that the official inauguration of the Kolwezi television and telecommunications center has a concrete proof of the Executive Council's determination to give all sons of Zaire equal opportunities for economic, cultural and social development. [AB191416 Kinshasa AZAP in French 1108 GMT 18 Aug 80]

REOPENED RADIO STATION--Bandundu, 29 Aug (AZAP)--Voice of Zaire's regional station of Bandundu, whose two transmitters--one 50 kw medium wave and the other 10 kw short wave--broke down for more than 4 months, has just been reopened. A team of technicians from the Voice of Zaire, who came to carry out the repair work on the equipment, returned to the capital yesterday after staying at Bandundu for 2 weeks. [Text] [Kinshasa AZAP in French 1115 GMT 29 Aug 80 AB]

CSO: 5500

ELECTRONICS MODERNIZING NATION'S TELECOMMUNICATIONS

Paris TELECOMMUNICATIONS in French Apr 80 pp 18-25

[Article by Pierre Fortin: "The French National System in the Electronic Hour"]

[Text] Smooth interurban traffic is an essential quality criterion of the telecommunication system. Equipping the national territory with channels and switching centers capable of handling the growth and diversification of needs and maintaining the reliability of the system are the constant concern of the General Telecommunications Office and the Interregional Office.

By authority of the Production Office, the National Telecommunications System Office is in charge of the installation and operation of the interurban network. Under a variety of names this service has already had a long history. The traffic explosion has brought about a new type of organization and decentralization which are described in the present article.

Slightly over a century ago, in 1876 to be exact, the American Alexander Graham Bell invented the telephone. Naturally, the first distance was very short, for the conversation was taking place between two adjacent rooms. However, Bell and his followers never stopped developing longer communications, thus turning the telephone into a truly "universal" communications tool.

Therefore, following urban telephony, the development of interurban telephony was undertaken. The first experimental communication was achieved as early as 1877 between Salem and Boston. The distance was about 30 kilometers and the quality was worse than mediocre, for the steel wire of the overhead telegraph cable was used.

Today telephony has become truly "universal," since communications have been possible even with astronauts on the moon. The several hundred million telephone sets installed throughout the world are used for the daily exchange of several hundred million interurban communications with the help of several million circuits which, in very big countries, could be several thousand kilometers long.

During the first half of the 19th century, the telegraph system was not yet widespread. It was only in the middle of the century that the telegraph system began to develop rapidly, reaching nearly 100,000 kilometers by the end of the century. This rapid development was due to the fact that the telegraph system was not only a means of communication but also a means of transport.

However, the telegraph system was not without its problems. It was a very expensive system and it was not always reliable. It was also a very slow system and it was not always secure. Despite these problems, the telegraph system was a major advance in communication and it played a vital role in the development of the world.

History of Underground Transmission Techniques

In accordance with Bell's suggestion, overhead telegraph cables were used to transmit the first underground telegraph circuit. They consisted of two parallel wires, one of which was insulated and the other was not. The wires were connected to a battery and a telegraph instrument. The first underground telegraph circuit was laid in 1844 between London and Fenchurch Street. It was a very simple circuit and it was not very reliable. However, it was a major advance in communication and it played a vital role in the development of the world.

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As a result of the increased demand for telegraph communication and the economic growth, the telegraph system underwent a considerable development. It became necessary to lay out a large number of lines along the coast. The traditional cable, at that point, proved to be inadequate and was replaced by a new type, the twisted cable, which consists of several twisted pairs of wires. This new cable was a major advance in communication and it played a vital role in the development of the world.

hundreds, and even thousands of circuits possible. The first coaxial cable, the laying of which was undertaken in 1939, was commissioned shortly after the end of the war, between Paris and Toulouse. Since then all new interurban cables of any importance whatever have been coaxial.



Optical fibers, the cables of the future.

At the beginning of the twentieth century a very important invention opened a new very promising possibility in the field of telecommunications: radioactivity. The decisive progress achieved as a result of the work of Marconi and de Bruijs led to the creation of radio broadcasting. However, this also led to the beginning of radioelectric communications which, however, were reserved to international traffic or to communications with ships and airplanes. In World War II the invention of radar made it possible to develop very high frequency technology.

Communications involving a very broad frequency band was necessary in order to spread over the entire territory the television service which had opened in the Paris area after the war. This led to the development of Hertzian beams: radioelectric connections using centimeter-range wavelengths, very directional, like light waves and, therefore, capable of channeling between two points televisual channels or telephone circuits whose quality and reliability entirely match those of cables.

The first Hertzian beams were developed in France by the Telecommunications, both for stabilizing interurban telephone circuits and for opening television channels for the French Radio and Television (RTF) which, only a few years previously, was under the jurisdiction of the Posts and Telecommunications. The first connection was established in 1953 between Paris and Lille, 1000 km, in order to enable Parisian viewers to watch live Queen Elizabeth II of England's coronation.

Ever since the liberation the French interurban system has undergone a considerable development thanks to the laying of a large number of coaxial cables and the building of several hundred towers and pylons handling extensive relays. Currently this net is divided roughly equally between coaxial cables and Hertzian beams. It is growing at the rate of 15 percent annually.

The Organization of the French Telephone System

At the end of 1978 the French telephone system was servicing about 16 million telephones. The interurban service required the division of the territory into districts currently known as autonomous dispatch zones (ZAA) after having been long known, particularly during the mutual autarkism period, as telephone groups. Let us note that the ZAA, currently totaling about 900, average five per department, roughly corresponding to the income tax districts.

A telephone communication is considered interurban if it is between two sets not installed within the same ZAA. As a general rule the entire interurban traffic of a ZAA is regrouped within a main center, the former group center, now known as the interurban feeding-point.

Bearing in mind the impossibility to directly pair all ZAA at a reasonable cost, relay centers have been set up to regroup and channel interurban traffic out of their service area. There even exist two types of transit centers: secondary transit centers, numbering about 50, each serving an average of 10 ZAA and, furthermore, 9 main transit centers serving an average of 5 or 6 secondary transit centers.

The national network, therefore, practically consists of two complementing networks: the internal network within the secondary transit zones, whose structure is essentially star-shaped, and the interconnection network of the relay centers which, conversely, has a densely laced structure. All in all, close to 50,000 interurban telephone circuits interlink the ZAA and the relay centers, over half of which directly link two ZAA between which, relatively speaking, distances are small.

The transmission lines serving the ZAA are mostly of low or average capacity (from several hundred to several thousand circuits), whereas those serving the relay centers and, particularly, those representing the main axes of the interconnecting network, have a capacity frequently on the level of tens of thousands of circuits. Thus, the Paris-Lyon axis, the most important of the national network, for it handles the traffic between the southeast and the northern half of France, as well as a substantial proportion of the international traffic of the Mediterranean Basin, has a potential capacity of close to 100,000 circuits.

It is worth noting that the national network was organized, originally, as a star-shaped set linking Paris with the biggest provincial cities in a pattern similar to those of the railroads and the highways. However, some 10 years ago, the need appeared to avoid to the maximum possible extent any transit through Paris and a major circumventing operation is underway so that circuits between provincial relay centers would avoid the Paris agglomeration. This switching system whose tracks go through Lille-Reims-Tijon-Lyon-Montpellier-Toulouse-Bordeaux-Poitiers-Nantes-Rennes-Caen-Rouen-Amiens, consists of a virtual succession of coaxial cables whose capacity could reach 50,000 circuits, doubled by a Hertzian relay of comparable capacity.

The national telecommunications network uses essentially interurban telephone circuits but also any other type of telecommunications facilities. At the beginning of 1985, therefore, the network included 76,000 telegraph lines providing telegraph and Telex services to some 40,000 subscribers; 20,000 specialized telephone connections; 18,000 circuits for the transmission of teletext data; 1,000 radio circuits, which in 1979 provided close to 55,000 high quality radio transmissions; and several television channels for video transmission experimentation.

The transmission arteries, coaxial cables, and Hertzian beams transmit information with a certain flow characterizing their handling capacity and which could be distributed among the various types of communications.

Thus, a 405-line color television program could be transmitted along one communication artery instead of some 7,000 telephone circuits. In the same manner a telephone circuit is the equivalent, in terms of output, to some 50 telegraph lines.

The Transmission Circuit

In order for a transmission channel to simultaneously serve television, telephony, data transmission, or the telegraph service, at the input of this channel a suitable electric signal must exist for each type of communication. At the other end a similar operation must take place to reconstitute the signal. Such operations, known as modulation-demodulation, are performed by the transmission centers. There is at least one transmission center within each interurban landing-point of the grid. A transmission center includes electronic equipment which, among other operations, performs the multiplexing, i.e., the regrouping of signals of different transmissions along the same channel.

Two types of modulation may be found within the grid: analogue and digital. Analogue modulation reproduces signals originating through the microphone of the telephone set and, therefore, directly stimulates the human voice. Conversely, in digital modulation the signals are coded in figures and a succession of binary elements which have the value of 0 or 1 only, i.e., in a code identical to the one required by the computers.

The multiplexing in an analogue transmission which, in fact, is the equivalent of the transmission of a frequency band, is that of frequency sharing which juxtaposes the bands of the different signals, whereas in digital modulation time-division multiplexing is used which intertwines the sequences of binary elements of the different channels. In order to achieve demodulation at the other extremity of the connection, in the case of analogue modulation all that is required is the separation of the frequency bands. In digital modulation the sequences of binary elements are separated.

Digital modulation is no more than some 10 years old. However, it is in the way of totally replacing analogue modulation which should be entirely eliminated from the French grid in slightly over 10 years. Actually, it is already showing a quite substantial economic advantage. Above all, however, it is perfectly adapted both qualitatively and economically, to time communication, which is totally silent, and the transmission of teleinformatic data.

The modulation equipment installed in transmission centers have made considerable progress over the past 10 years. Originally, i.e., immediately after the war, when the first Paris-Toulouse coaxial cable was laid, it involved the use of tubes resembling those of radio sets. Following the invention of the transistor, in 1949, it became possible to develop ever more numerous similar equipment, less expensive, and consuming less electric power.

As a result of a development generalized by the adoption of a new generation of equipment every 10 years, we are now facing the generation of the 80's, characterized in terms of the first generation of the 50's by a reduction by a factor of 20 in terms of cumbersomeness and a somewhat lesser reduction in power consumption; the current digital equipment in 1980, has the same size and power consumption as similar equipment.

The most recent equipment of the 1980 generation is essentially based on integral circuits similar to those used in computers. The reduction in price and increase in reliability have been equally substantial. This development should be considered as one of the main explanations for improvements in the quality of interurban service and, above all, of the substantial reduction (in constant francs) of the cost of interurban communications.

Under the Sign of Decentralization

Within Telecommunications, the National Telecommunications Network Office (NTRN) is in charge of programming, operating, and maintaining the national network.

The NTRN is a national service staffed by slightly over 7,000 agents scattered throughout France in a little more than 200 territorial centers, handling all transmission centers, relay towers, pylons, and cables of the interurban grid.

This national service, initially known as the Long Distance Underground Cables (LSDC) was created in 1924. Following the laying of the first Paris-Strasbourg long distance cable, it became quickly apparent that the regional services which were then under the authority of a regional postal director did not possess the required technical facilities, for at that time all telephone lines were overhead and all switchboards manual. Furthermore, it was clear that the interurban grid was a separate entity and that its "Balkanizing" was not efficient.

The LSDC service developed together with the network of long distance cables. At the beginning of the 1950's, following the appearance of the Barixian beams, the service was renamed Long Distance Lines (LDL). In 1973 it became the National Telecommunications Network Office (NTRN).

Currently, the NTRN is a service operating on a highly technological level. Thus, even though its personnel accounts for only five percent of the total Telecommunications personnel, it manages resources amounting for nearly 10 percent of the total Telecommunications facilities. This high technical level is proved by the use of over 2,500 technicians among the some 7,000 agents and, above all, the over 1,000 technical communication specialists.

The DTRN centers may be classified into three big categories. The cables centers, numbering 18 (or roughly one per region) center, with the help of about 1,200 agents, the maintenance of 70,000 kilometers of cables, 30,000 of which coaxial. The Moroccan centers, numbering 22, provide, with the help of 400 agents, the maintenance of Moroccan equipment installed in 500 towers and pylons. The operations centers, numbering about 700, provide, with their 4,000 agents, the operations of the grid and the maintenance of the equipment of some 2,000 interurban transmission centers; the 30 most important ones have been given the responsibility of main operational centers in charge of managing and coordinating the activities of the other operational centers and the Moroccan centers.

The management services, with a personnel of 1,200, and over 150 senior cadres, are in charge of conceptualization, programming, equipment, and management of the network and the staffing of the centers.

Finally, most of the equipment and installation operations are performed by itinerant technical crews, the national brigades, totaling close to 500 technicians or technicians alone.

Quite naturally the management at the national service of the LSGB was established in Paris in 1935. From a few units, originally, the managerial personnel of the LSGB, followed by the LSR and the DTRN, had gradually reached 1,000, as a result of the considerable increase in the number of circuits and the growth of the technical complexity of the interurban network. The need for a decentralization of communications between the office and the centers, therefore, was gradually developed starting with the beginning of the 1970's.

It is for this purpose, as well as for obvious territorial management considerations, that in March 1977 the government decided that the DTRN management would be decentralized through a reorganization and transfer to the provinces. The reorganization consisted of replacing the one-level structure by a two-level structure: five territorial offices, known as Operational Offices for Telecommunications of the National Network (OITRN), in charge of operational responsibilities under the authority of the national DTRN office which could then concentrate more on general technical and financial management.

The five OITRN were located in Lyon (with a branch in Aix-en-Provence), Metz (with a branch in Lille), Nantes, Paris, and Toulouse. At the beginning of 1980 the OITRN at Metz was the only one not as yet installed, its functions being temporarily assumed by Paris. The establishment of these OITRN made it possible to shift about 150 jobs from Paris to each of the cities of Lyon, Nantes, and Toulouse.

However, the most important decision taken by the government, in March 1977, was that of transferring the national office to Toulouse. This was an acknowledgment of the fact that a national service had not previously been approved. Nevertheless, this transfer, affecting

over 500 jobs, required a delicate refinement and a certain gradualism: Undertaken in the summer of 1979, it is scheduled for completion only by the summer of 1981, when the 500 agents will have taken over the central building which is under construction in the vicinity of the Toulouse-Blagnac Airport.

The Future

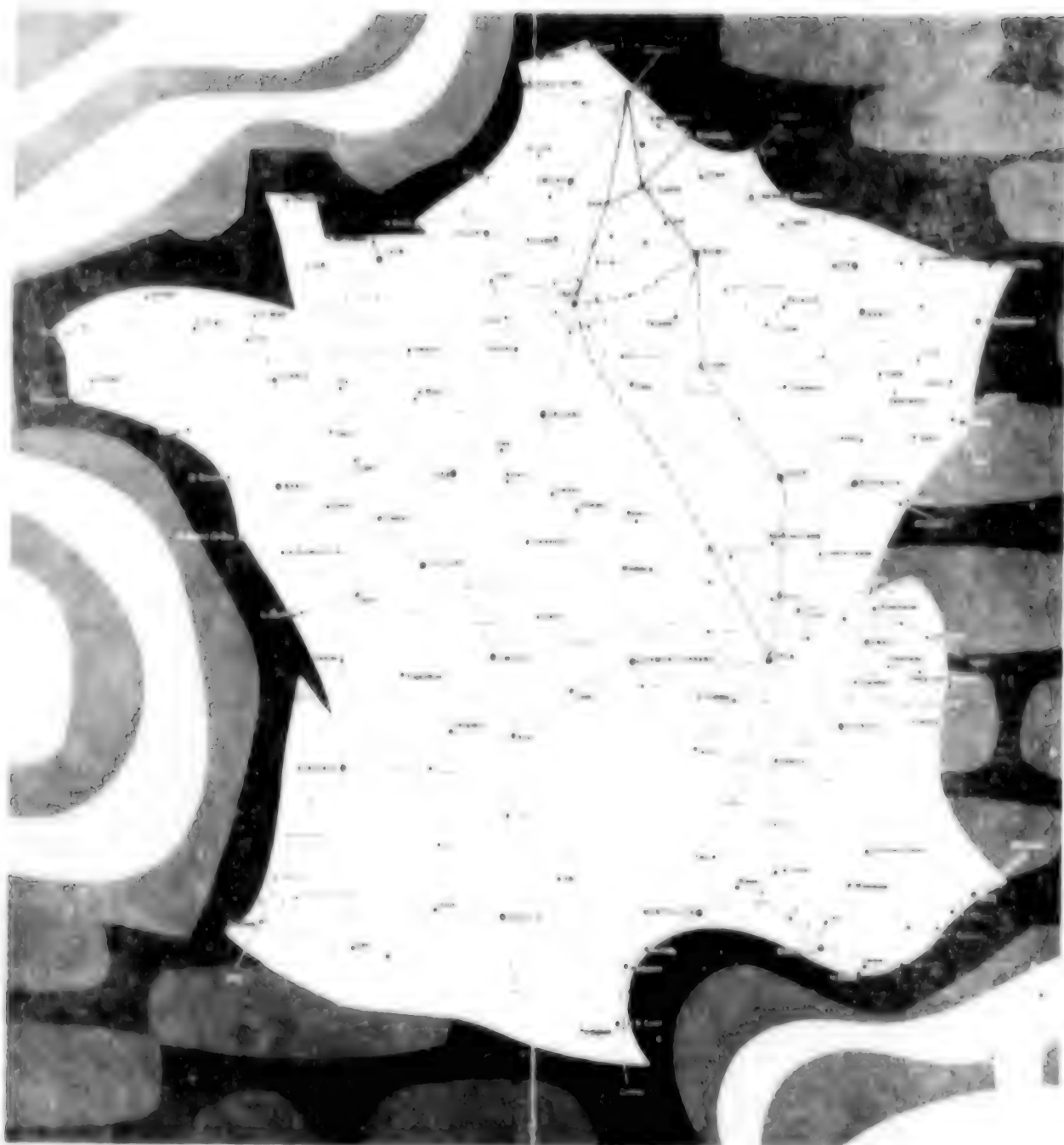
The decentralization radically changes the DTRN. Actually, it is preparing to face the responsibilities of the future national network which will be quite different from the present one in more than one respect.

The network will continue to expand. Between 1990 and 1995 some 30 to 40 million subscribers will require nearly triple the amount of circuits compared with the 14 million current subscribers, not only for their telephone interurban communications but for the new services which the age of telemechanics promises us.

The network will be entirely digital, for some 10 years from now the replacement of analogue equipment will have been carried out on a parallel basis with the replacement of the Crossbar automated switchboards by time-sharing electronic switchboards.

Finally, new technological developments will be extensively used. Naturally, this will include telecommunications satellites, starting with the Telecom 1, to be launched in 1983 with the Ariane rocket. This will make possible extensive data transmission serving the big enterprises. Optical fibers will be used. These are new types of cables whose wires are made of silicon rather than copper and which, unquestionably, represent considerable progress in the national network and the distribution networks.

The task will be hard but inspiring. Once again the Telecommunications will be able to rely on the services of the DTRN.



The *major axis of information* – axial diffusion.

Cables

A 300 circuits cable, laid in 1929, via Dijon and a 500 circuits cable, laid in 1933, via Nevers. These two cables are no longer used in inter-urban service.

One 1,000 circuit cable shared by Telecommunications and the SNCF, laid in 1950 along the railroad tracks.

A coaxial cable with a maximum capacity for 24,000 circuits, direct (via Clamecy), laid in 1974.

A coaxial cable with maximum capacity for 50,000 circuits, being laid alongside the preceding one.

The laying of a coaxial cable with a capacity for 50,000 circuits along the TGV is planned for 1983-1984.

Hertzian Beams

The first connection established in the 1950's was closed down some 10 years ago;

A 4,800 circuit connection (five channels at 960 signals), commissioned in 1972, via Dijon;

A connection with 1,800 signal channels (one out of seven possible in operation), completed in 1976, via Dijon;

A connection with 2,700 signal channels (three out of seven commissioned), operational since 1978, via Dijon;

A new direct connection through 2,700 signal channels will be commissioned in 1980 (with four channels out of possible seven).



1.2/13.5 coaxial cable

Coaxial Cable Structure

As the photograph shows a coaxial cable is made of a certain number of tubes consisting of a hollow external conductor and an internal conductor of the same axis (coaxial). The internal conductors are always made of copper. Over the past 10 years or so, however, the external conductors of the new types of French coaxial cables have been made of aluminum.

The number of tubes is always even, for they are unidirectional. They are insulated from each other and the overall cable is electrically and mechanically insulated with an external sleeve.

A cable is classified in terms of the number of tubes and their dimension (a ratio indicates the external diameter of the internal conductor and the internal diameter of the external conductor).

The initial Paris-Toulouse cable had two 5/18 tubes.

In the 1950's four 2.6/9.5 tube cables were used.

Starting with 1960 1.2/4.4 tube cables were used, totaling as many as 48 tubes.

Starting with 1975, cables with 3.7/13.5 tubes 2.8/10.2 as of 1980), containing as many as 12 tubes, have been used along the major axes.

The cables have a capacity which, in analogue transmission, by pair of tubes, may reach the following capacity:

- 2,700 telephone circuits with an amplifier each 2,000 meters for 1.2/4.4 cables;

- 10,800 circuits with an amplifier each 1,500 meters for 2.8/10.2 cables (2,000 meters for 3.7/13.5 cables).

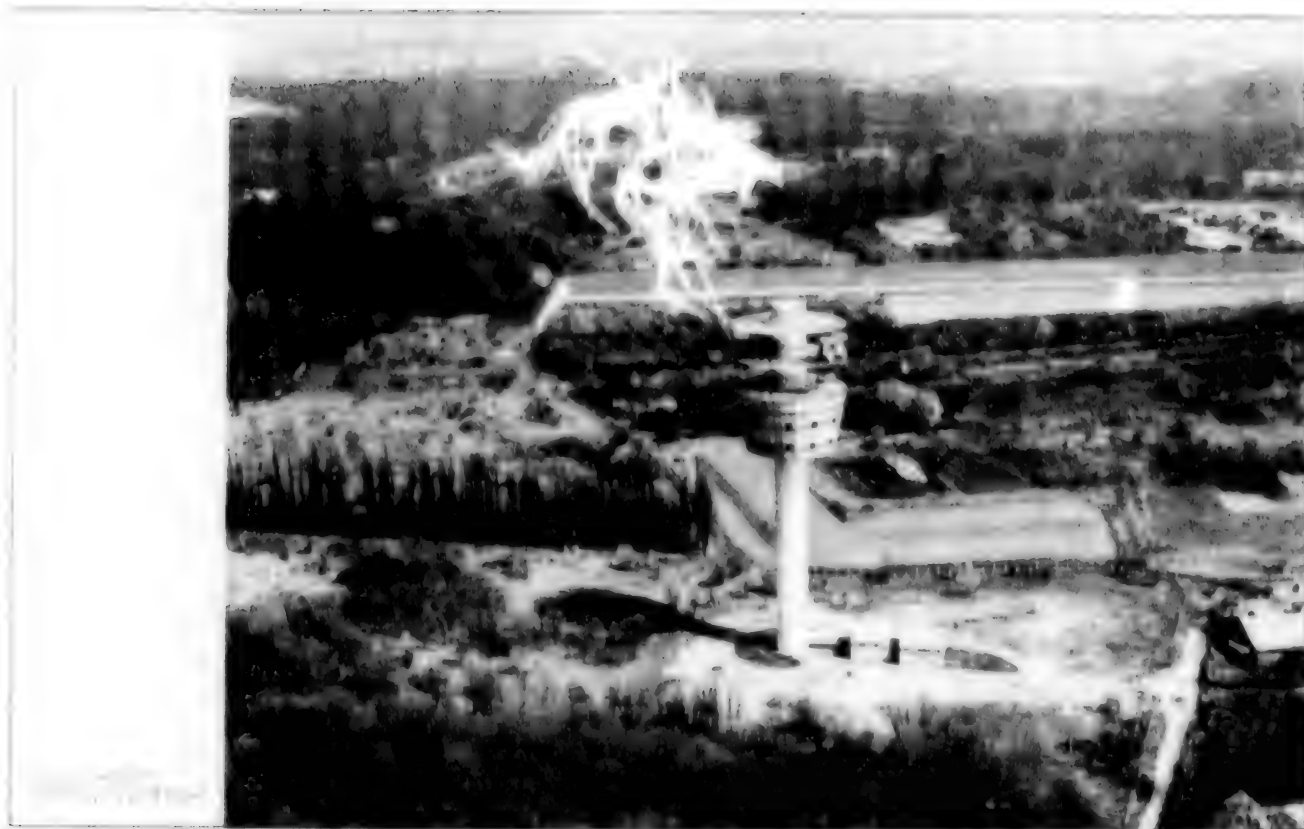
Structure and Development of the National Network

The network no longer includes overhead circuits and less and less traditional underground cable circuits, the latter being used ever more frequently in local circuits.

The importance of this set is properly characterized by the telephone circuits which, at the beginning of 1980, accounted for close to 90 percent of the used capacity, the remaining 10 percent being used for telegraph communications and specialized telephone and data transmission connections.

The following table, which describes the development of the network over the past 10 years, will show the exceptional growth of Hertzian connections whose capacity has been increased fortyfold in 10 years, with the expansion of the national network averaging 18 percent per year.

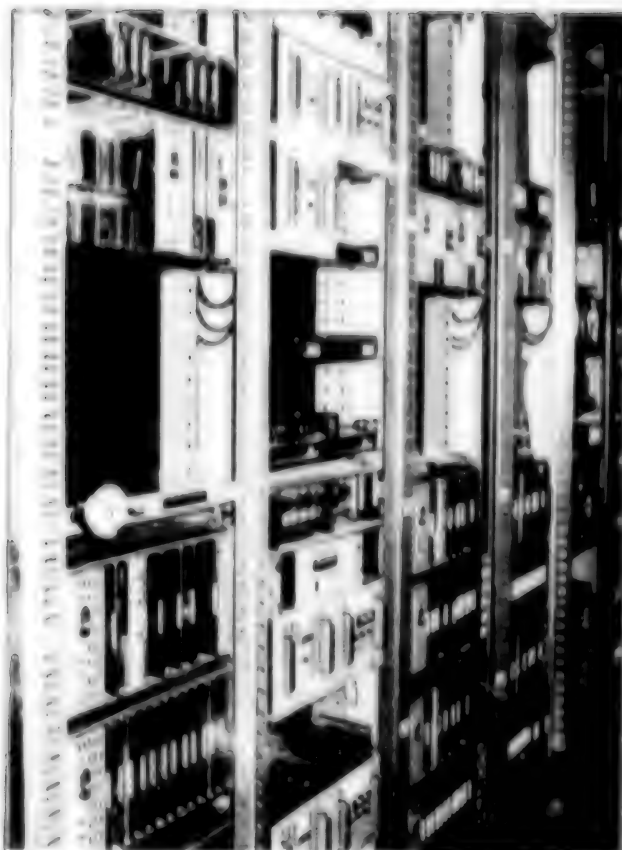
	Beginning 1970	Beginning 1975	Beginning 1980
Total number of telephone circuits	83,000	196,000	450,000
Of which:			
Traditional underground cables	42,000 or 51 percent	35,000 or 18 percent	17,000 or 4 percent
In coaxial cables	36,000 or 43 percent	114,000 or 58 percent	233,000 or 52 percent
In Hertzian beams	5,000 or 6 percent	47,000 or 24 percent	200,000 or 44 percent



Hertzian relays in Andilly (Val d'Osie)



The major interurban cables are the telephone highways.



Modulation equipment in a transmission center.

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1000. 1000

TELECOM-1 PROGRAM, FUTURE OUTLINE

PARIS: TELECOMMUNICATIONS IN FRANCE-Apr 79, pp. 41-46

PARADEUR DE L'UNION FROIDE: "Telecom-1 et les besoins de l'interphone"

[Text] ... Following the 16 February 1979 decision, the Telecom-1 French initiative program entered the implementation stage after a number of the initial program platform was achieved on 12 September 79. The purpose of the program is to provide France with a nationwide system of conventional telecommunications and, above all, thereby to high output connections to play a role in telephony.

The 1984 will bring a national average telecommunication available to France, the next 1985-1986 French Telecom-1 (France Telecom) will be the first in 1984-1985.

Nevertheless, the success of such a project, which is considered in terms of the 1984 introduction of the French Telecom-1, the 1985, London, or other large system is developed around network is undeniably for a country which, France only within the context of a large development of communication. France including the use of introduction of new services, among all parts of the territory.

In particular, the national development in terms of communication of all France, which will depend on the development of the next few years, will be the one that will be a development of the system of such a "new" network will not with the introduction of network, which will be a new, including both the 1984 and 1985 French Telecom-1.

The program is part of the overall plan of the work of telecommunications in France. This is the first step in a series of steps, one of the main parallel being the French Telecom-1 in the development of telecommunications in France, which is the first step in the development of telecommunications in France, which is the first step in the development of telecommunications in France.

The Telecom-1 program is outlined:

The Telecom-1 program will provide the population with the Telecom-1, thereby, providing a network with the conventional telecommunications.

and, specifically, services to overseas departments and territories. (DOM-TOM) the work for which was tangible. Thus, the first mission set for the Telecom satellite was to channel telephone communications between France and the DOM-TOM, replacing the Intelsat satellites, resulting in substantial foreign exchange savings; Telecom-1 will also transmit television programs to these same DOM-TOM, the extension of this service being currently hindered by the cost of Intelsat communications; the establishment of a video transmission channel will also be part of its duties thanks to the property of outer space systems to broadcast on portions of a territory or on its entirety programs of interest to narrowly defined consumer categories; finally, it will play the role of handling high-volume inter-enterprise traffic, which is the topic of this article.

The total cost of the Telecom-1 operation is estimated at 1.1 billion francs. It is a major investment which, however, will provide, in addition to direct earning prospects, the possibility to establish instant contact with any given point of the territory, thus avoiding costly investments along axes whose traffic would not justify the installation of a ground infrastructure. Telecom-1 will make all areas equally accessible to telecommunications facilities. This will be a major contribution to the territorial management.

Inter-Enterprise Traffic

Obviously, traffic among enterprises will pose the biggest number of problems facing the network among all the types of communicable types of traffic at the time the Telecom-1 satellite will be commissioned. Enterprise traffic is, in fact, quite variable in time (according to use and periods of activity: working time, weekends, evenings...) and in other ways (big establishments may exist in areas with low telephone density); its nature will similarly be technical (convention and introduction of videoteleconferencing or of high output teleprinting, considerable variations in terms of meeting the needs of enterprises, which will undergo changes in the current volumes of inter-enterprise traffic). Telecom-1 is called to function as a system (since the enterprise directly controls the development of their communication costs).

In particular, since this type of traffic creates a very substantial imbalance between internal and external requirements, an imbalance which could only increase with the introduction of new services, any telecommunications may involve into particular changes in transmission facilities.

Finally, the appearance of new communication services within the enterprise would almost inevitably require digital communications, which is the very reason against its adopting itself to the variety of outputs, whereas it would not be justified before a sufficient period of time in the case of conventional communications and determines the different trends in the organization of the ground infrastructure.

Working with observations in mind, meeting the needs of enterprises in the future will require a digital network whose capacity would be adjustable in line to meet the high volume which could develop at any given point of the activity, either automatically or permanently, and whose rates would be totally independent of distance.

The solution to this problem provided by Telecommunications, considering the current state of technology, is by far the most satisfactory, providing that the commercial equipment required is not too heavy for the enterprise which will be using it.

Yet, the concept of the system of Telecommunications is facing a certain number of technical problems which could limit its use unless specific precautions have been introduced in the definition of the system. Linkage with other networks creates difficulties, for it must take into consideration the time of transmission (the delay) which is required for a 11,000 kilometer cable crossed by the signal. The interfaces and, specifically, the signaling problem, require a coordination which is relatively complex, bearing in mind the program's deadline. Finally, the need for multi-connection systems greatly reduces the possibility of linkage with such a grid.

There is no internal contradiction here, in other words, inter-connection, contrary to the situation existing in both the technical and commercial fields. For it is precisely the one which will be subjected to the greatest attention following the implementation of the new network.

The Adapted Solution

In order to carry out this mission, the Telecommunications system consists of several elements. First, the receiving station, put into geostationary orbit above the half of Mexico, kept in orbit position with an adequate accuracy in orbit so that the earth's movement would not require a tracking system & ground station, keeps as a reference station, to place the ARST system (Mexico's first receiving station) which will detect and modify signal variations in the direction of the desired channel needed at any given moment for a specific communication. Finally, ground stations installed at the ends of cables, connecting the communication of the satellites, may well be kept as possible. Omnidirectional antennas, a telecommunication system, and an ARST terminal, whose installation and future work is being accelerated.

The satellite communication and ARST stations will provide rapid responses. Communication capabilities which will be improved, according to demand, to meet communications required in the grid. This is a technical solution ARST ground grids would be capable of providing, at least in the immediate future. The only ground stations which could eventually handle the transmission of an entire range of output in the Telecom which will achieve total channel permanent digital communication.

Boasting to meet the high cost of transport for an interface which would not use it 24 hours out of 24, as well as its lack of flexibility (since it will be necessary to build a capacity which could be increased or reduced within a relatively long period of time, particularly in the case of cable digital systems), the Telecom-1 system offers a far more satisfactory solution for the user, putting at his disposal any kind of volume for the period of time and connections he requires.

Each of the five satellite relays assigned to intra-enterprise communications will have a capacity close to 25 Mbit per second, or about 500 channels at 60 kbit each, enabling on a permanent basis to the overall communication area.

Within this flow of 25 Mbit per second, the AMRT system will insert at any time and in the best possible way information from different users through their AMRT terminals; this will enable the information receivers to receive each data at any given point of the territory by retrieving previously the data located at them. For example, a company headquarters could broadcast data to all its establishments at 60 kbit per second for 30 seconds and almost instantly afterwards (or even simultaneously) send a videoconference of 200 kbit per second with a commercial agency, listing commercial agents. Obviously, the system will be able to supply bilateral or multilateral communications (the latter with or without feedback channels).

The range of volumes offered will be consistent with a digital hierarchy: 32, 64, 128, 256, 512, 1,024, and 2,048 kbit per second.

As to quality, the selected margin of error is twice as small as in the case of analog systems, and the system will be able to correct errors automatically. This will improve the quality, notably, in the case of a variation of power.

Finally, the security indispensable in this type of communication is guaranteed by the fact of the complexity of the operations at the AMRT terminals which prevents any statistic from retrieving a package and by the fact that it can be strengthened by the codes specific to each service.

Advantages

The system permits very flexible changes in length of output and delivery channels. It will greatly affect the organization of virtual companies or management, freeing them from the constraints of the network of fixed capacity.

On the one hand, in fact, the introduction of new services whose output would range from a few Mbit/sec to the order of Gbit/sec is made possible by the introduction of a new generation of equipment (digital) to replace analog equipment.

convention which could channel the new "globalization" of the services industry to the benefit of the least developed countries, which could be essential for the success of the 21st century.

In the future, however, the distributed systems community have inadequate performance, especially because of errors in effort, as far as data transmission is concerned, additional time may be required in a backup, as in the number of conventional instructions, it is fairly sufficient, since the static model requirements are frequently gone through independently. This activity is defined by the high cost of a ground network. Telecommunications will provide a solution to this problem.

Finally, Delmonico will conduct business that, the invalidation of a group's status in the custody of a non-relationship would enable the father to be linked almost automatically with the entire company in which it belongs, both through telephone, fax, e-mail, or any other means.

Twissem-1, therefore, could bring about an efficient communication of the organization of the subsidiaries of a company, for, with the reduction of distributive economic complications, it seems likely that such a numerical service would be of particular interest to the networks of several points. This view is reinforced by the fact that the billing would be based on judges and transmission time and, moreover, would be independent of distance. The use of such a data transmission system (with a 400/kb station) is, overall, clearly useful for, in particular, very efficient use of time and staff both in the areas of the banks, ...

[illegible]

In order to prepare the team a suggestion is that they possibly use the central teleconferencing office that already opened a dialogue with the team using internet technology.

[illegible]

...being at a time favorable to innovation (European Launcher Ariane, new telecommunications systems...) but also critical from the viewpoint of global impact on the world of communications, the Telecosm program will ensure a flexible transition between the telephonic and telematic ages. Being the only one capable both to anticipate the development of the important communications infra-structures which telematics will trigger and to ensure the maintenance of infra-structures (since it will be able to orient or reverse itself almost instantaneously toward the axes along which demand, unpredictable and dynamic by nature, will be manifested), it is not a gamble on the future but an indispensable tool, be it only for insuring the transition between these two types of societies.

Finally, it opens the way to a generation of comparable systems and a broader vision (specifically European) the need for which will be felt ever more strongly in the years to come.

In this project Telecosm must be accompanied by an intensive effort to promote new services; the harmonizing of the various protocols and interfaces which will become involved in the operations of this complex system; and a daring industrial policy in terms of the definition of high performance materials. Above all, its use should be such as to offer substantial savings to client enterprises. Its flexibility and adaptability could certainly make this possible, offering the best possible advantages in security.

Telecosm Program Schedule

Space Segment

20 February 1979:	Governmental decision to organize the program.
Beginning of 1980:	Tender for a bid for the three satellites.
July 1982:	Launch of the first flight model.
April 1983:	Launch of the second flight model.
Mid 1983:	Beginning of the system's operation.

Ground Segment

1978:	Initiation of ground stations and AMST equipment.
Beginning of 1980:	Contract for prototype manufacturing.
Mid 1981:	Agreement on the prototypes and the satellites.
End of 1981:	Initial negotiations for the manufacturing of radio equipment.

Space Section of the Teletel System

The space section of the Teletel system will consist of three satellites and telecontrol, telemetry, and television stations needed to insure the proper functioning of the satellites. Two satellites will be launched initially. The first will be an operational satellite supplying the service; the second will be an backup (reserve); a third satellite will be launched should one or both satellites be lost or break down.

The Teletel satellite will be positioned at 10° west on the orbit of geostationary satellites, in a circular orbit in the plane of the equator at a height of 36,000 kilometers from the earth, approximately over the Gulf of Guinea. It will be kept in a fixed position with a range of $\pm 0.1^\circ$ of its nominal position and stabilized in three axes kinematically (control) and through static propelling. The fluctuation in the beaming of the antennas will be less than 0.1° .

The primary power source (to generate it (about one kilowatt) will be supplied by solar cells mounted on panels permanently turned to the sun. During eclipses (of a maximum length of 72 minutes at equinox time), the satellite will be fed by a nonrechargeable battery.

The average life of the satellite will be 7 years; it will be determined by the amount of gas needed to maintain it in its position.

From 1,000 kilograms weight at launching time at the beginning of service (10% of payload at which will be the payload of telecommunications equipment), following the passage in the space orbit, its weight will be reduced to 500 kilograms.

The launch launch will take place at the end of 1997 from the Guiana Space Center with the Ariane launcher. It will put the satellite on a circular orbit with a perigee 360 kilometers high and an apogee of 36,000 kilometers. At the apogee orbit will be achieved with the help of a motor. The second satellite will be launched 7 months later.

Teletel-1 will consist of a platform for which will carry the payload. It will include, first of all, a service module which will contain the attitude and position control, power, permanently electric system, instruments, telemetry, and apogee motor subsystems; the module is identical to those of the Eutelsat (European Communications Satellite) and Eutelsat (European Communications Satellite) programs. Teletel-1 will also consist of a "payload" module adapted to the mission which will carry the telecommunications antennas.

The working distance will be the following: 10.5 launching position; the orbit height will be 10° above from the top of the antenna to the center of the apogee motor, corresponding to a value of 3,184 meters in diameter. In orbit the speed of the solar generator will be 13.8 meters.

The Ariane Launcher

Whereas over the past few years a number of countries have learned how to build satellites, so far, the United States and the USSR alone were able to manufacture "launchers" which could place them in orbit. That is why an American launcher had to be used for the Symphonie Franco-German telecommunications satellites; a NASA contract stipulation was that the satellites should be such as not to cause any harm to American industry, i.e., in fact, never to be used commercially.

A number of European plans and even attempts to avoid this monopoly failed.

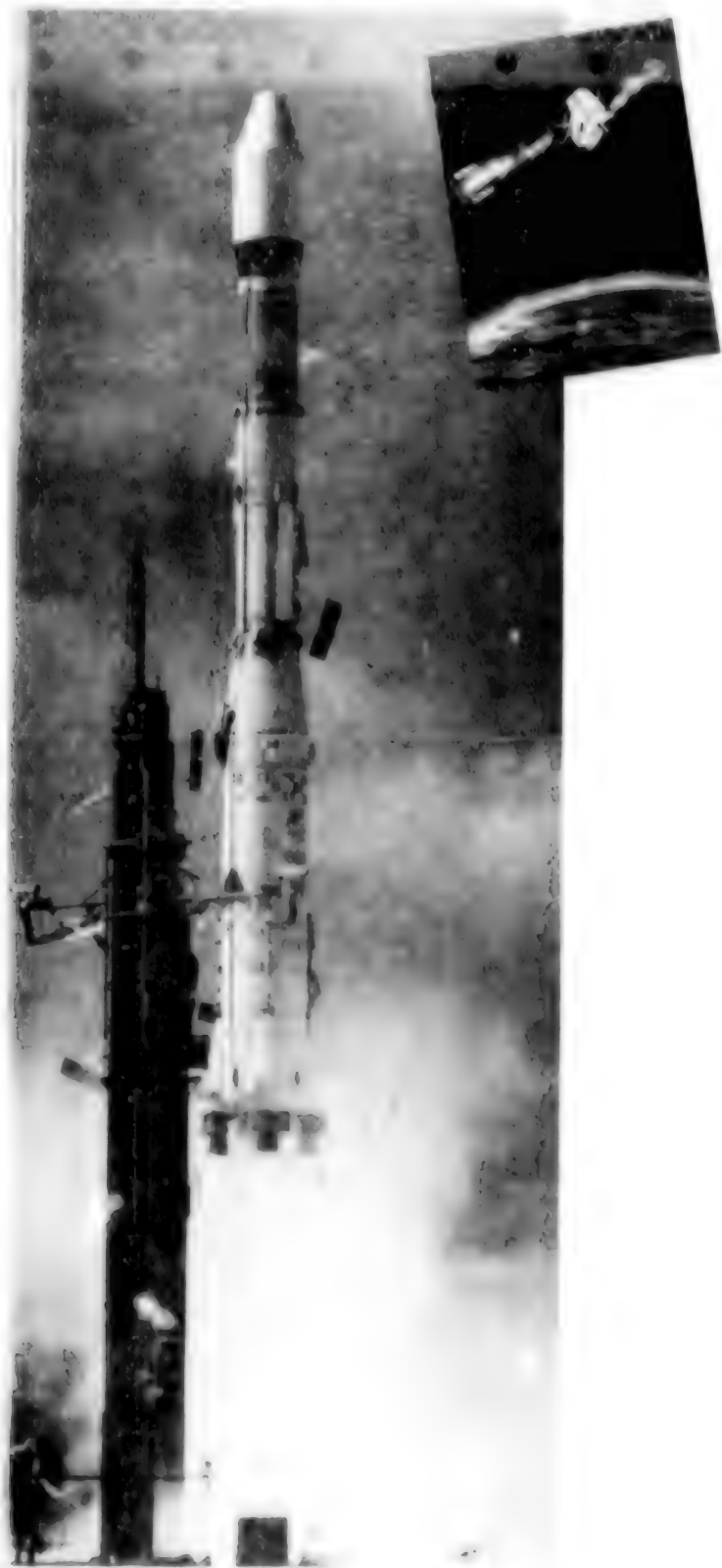
In the 19 December 1972 European Space Conference, France announced that it was ready to follow alone a program for the development of a launcher; it was soon joined by other countries wishing to join a European Space Agency (ASE = ESA in English) for the study and development of the Ariane rocket. The financing was as follows: France, 63.50 percent, Germany, 20.12 percent, the balance being distributed among Belgium, Denmark, Spain, Italy, the Netherlands, the United Kingdom, Sweden, and Switzerland.

According to the agreement protocol concluded on 7 February 1974 the ESA assigned the role of contractor to the National Center for Space Studies (CNES) and that of industrial designer to the National Company of Aerospace Industries (SNIAS/Aerospatiale).

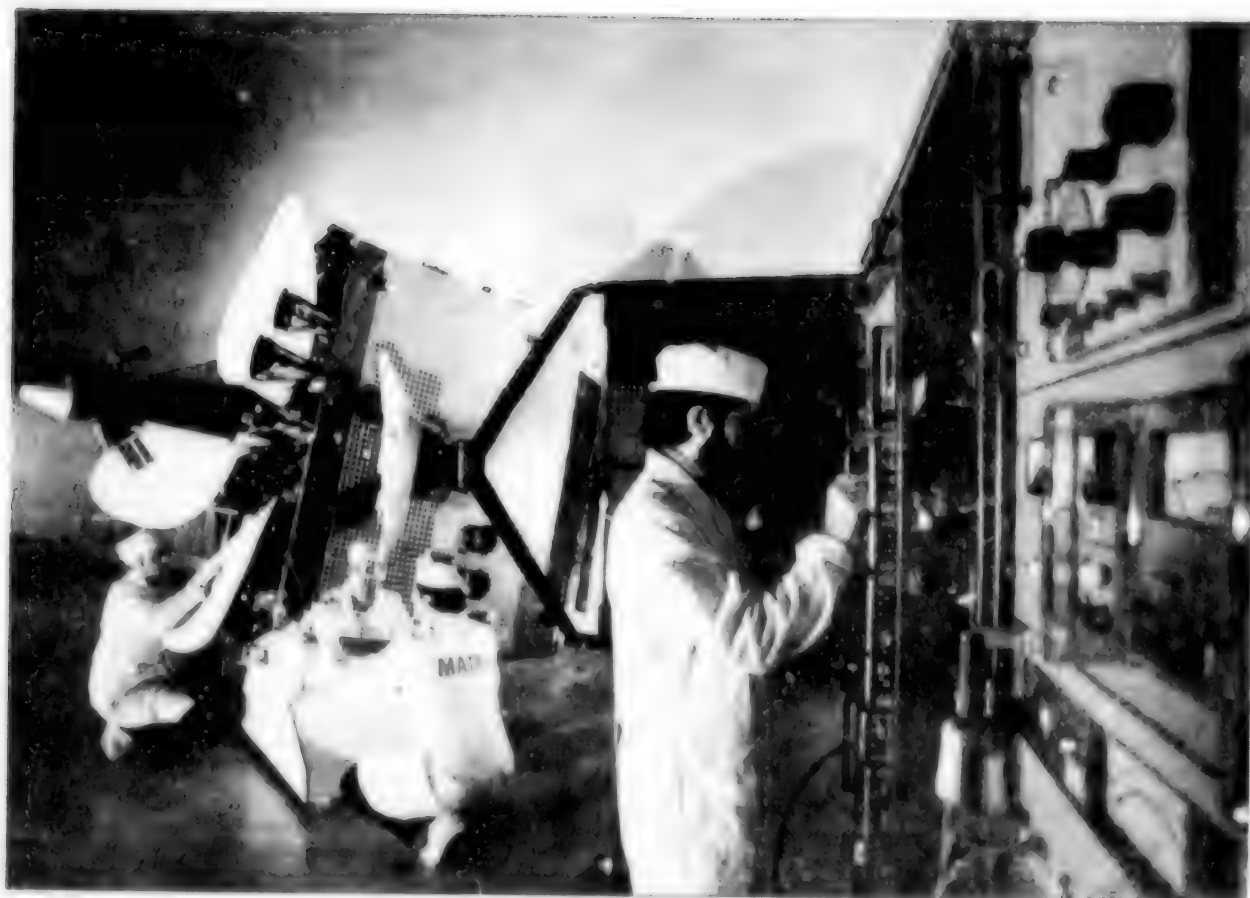
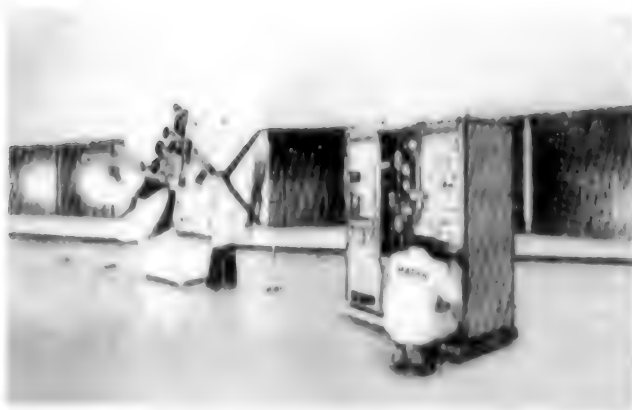
The first tentative launch of 24 December 1979 from the Kourou Base in French Guiana was successful. Three more launches will take place through October 1980. However, only one more was needed to consider the Ariane launcher suitable. Ariane, which uses a simple and tried technology, is already considered a worthy competitor of the American space shuttle.

Initially it will be used to put into orbit telecommunications satellites. The first of these launches, in 1981, will be of an Intelsat V for the Intelsat international organization. In 1983 the MARECS maritime navigation satellites will be launched for the ESA. In 1982 and 1983 ERS satellites which will provide intra-European telecommunications connections and the French Telecom-1 system satellites will be launched.

Technically, Ariane includes three stages and a nose cone, 47.40 meters high, weighing 551 tons at ignition (excluding payload); it will be able to put first in transfer orbit (200 kilometers perigee and 35,800 kilometers apogee), and, subsequently, on a geosynchronous orbit (35,800 kilometers) a load of 1,700 kilograms; or else, on a low circular orbit (low kilometers high) a weight of 4,800 kilograms; it offers the possibility to launch two satellites simultaneously with the SYLDA system (double system launching system).



Guiana, 24 December 1979, 17:16:38 hour (Standard Time) Kourou Space Center, Liftoff of the First Ariane 5 (in inches)



Personnel working on the large container at the test facility.

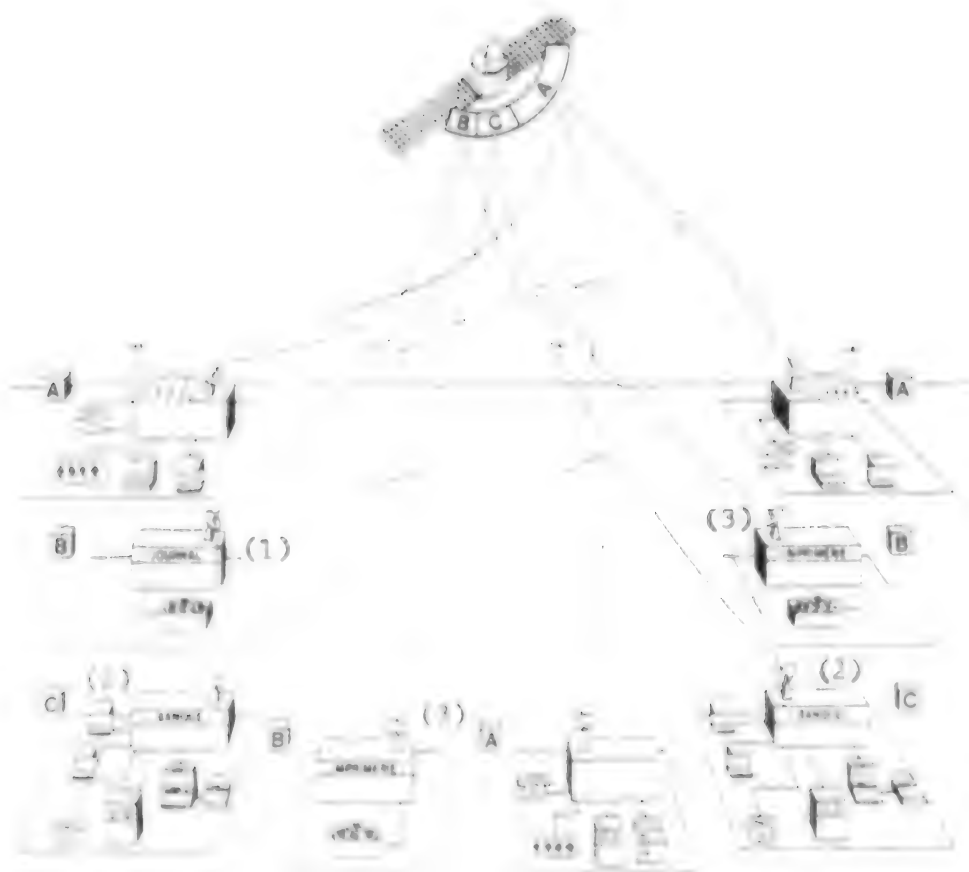


Figure 1. General simulation of transmission capacity -
 (1) - receiver; (2) - sender; (3) - printing press.

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TELECOMMUNICATIONS STATISTICS CHARTED FOR 1979

Paris TELECOMMUNICATIONS in French Apr 80 pp 68-71

[Text] 1979 Results

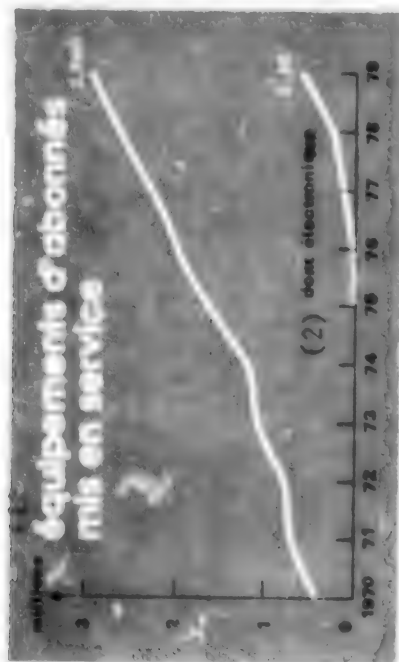


Having doubled in 4 years, the growth pace of the telephone service was stabilized in 1979 at close to 14 million lines.

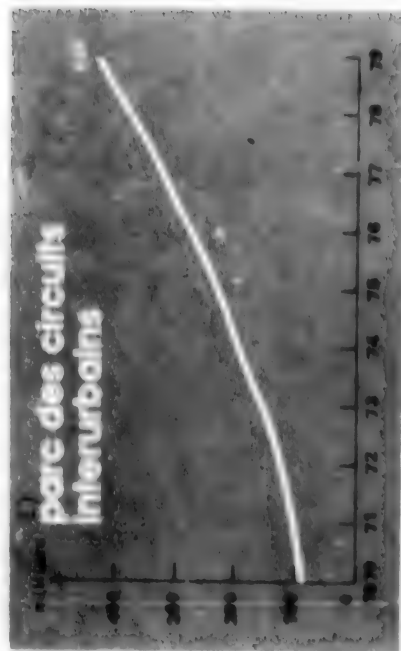
Key:

- (1) Millions
- (2) Main lines

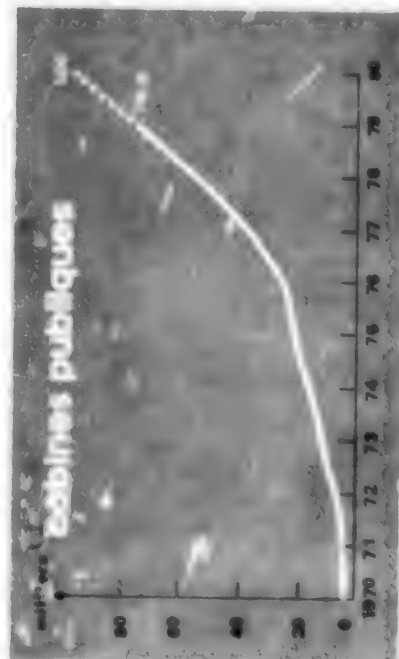
(A)



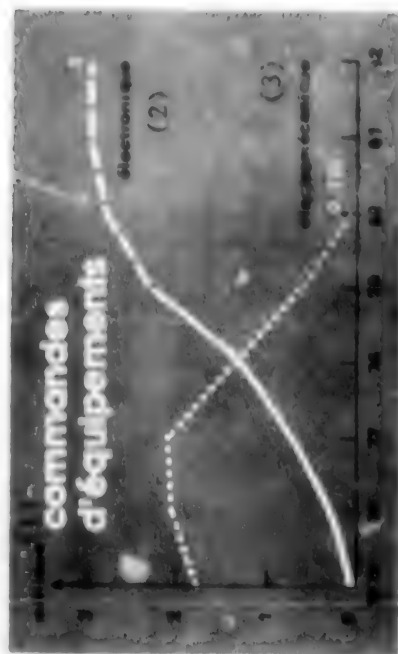
(B)



(C)



(D)



Key:

- (A) Let us note that 74 percent of the equipment installed in 1979 was electronic.
(1) Millions, (2) Of which electronic
- (B) Regular growth of the 14 percent facilities making possible traffic handling improvements.
(1) Thousands
- (C) Almost 30,000 public telephone booths in service or nearly twice the 1976 figure.
(1) Thousands
- (D) The share of electronic switches predominates in orders placed. This investment will facilitate the introduction of new goods and services.
(1) Millions, (2) Electronic, (3) Electromechanical

Service Quality

(A)



(B)



Key:

- (A) The substantial growth of the overall indicator of service quality accurately indicates the importance of the telecommunications efforts.
- (B) A slowdown of demand, combined with a high level of demand satisfaction allows the average connection time to be less than 5 months.

(1) Months

(A)



Key:

(A) As a result of the increased number of subscribers' transfers, the development of connections is still continuing this year. Conversely, net demand has been slowed down for the first time in 10 years.

(1) Thousands, (2) Net demand, (3) Satisfied demand

(B) Telecommunications employ 155,000 regular workers, contractors, and auxiliary personnel.

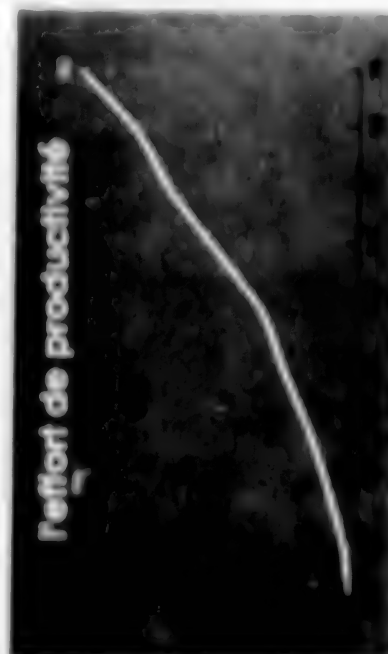
(1) Thousands

(C) Improvement of management methods and introduction of new techniques leading to continuing productivity growth.

(1) Number of main lines per agent



(B)



(C)

Financial Data

(A)

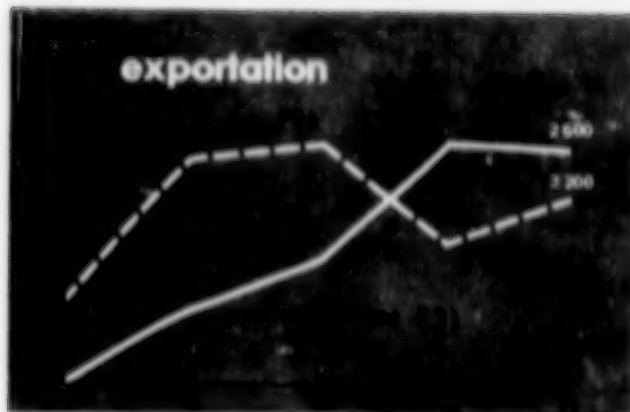


(B)



Key:

- (A) The cost of telephone communications is continuing to decline in terms of constant francs.
 - (1) 1970 = 100
 - (2) Cost of parts
 - (3) Base tax
- (B) Increased operational results concretize management efforts made over a number of years.
 - (1) Billions

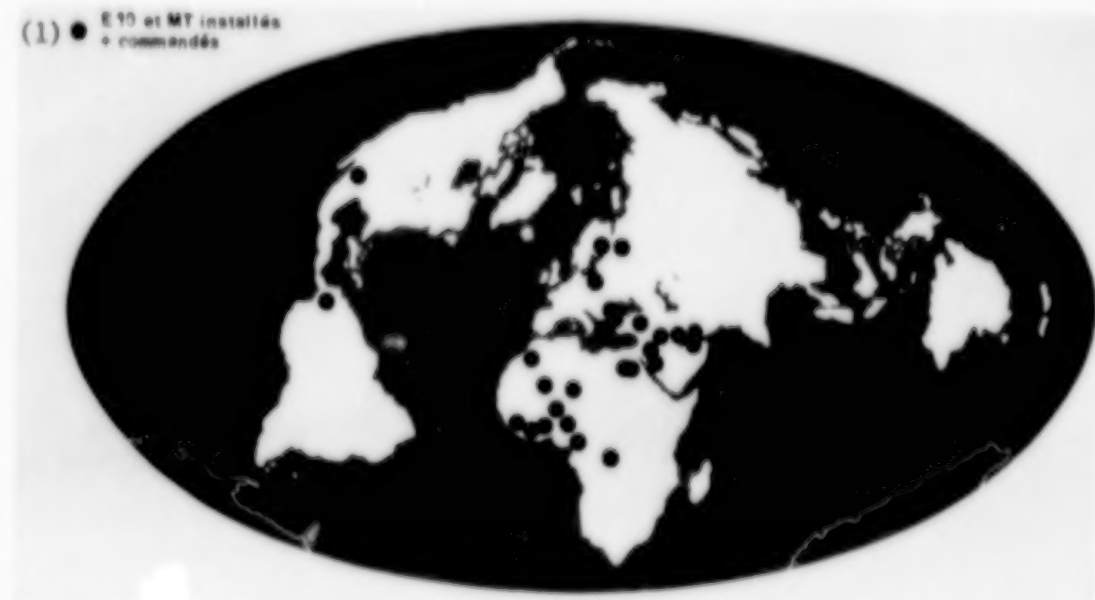


An improvement in export figures is expected for 1980 based on received orders.

Key: (1) Millions, (2) Orders, (3) Turnover

Temporary Switchboard Exports

In the field of temporary electronic switchboards over 35 countries have adopted French technology.



Key: (1) E 10 and MT installed and ordered

New Goods and Services

Marketable

TRANSPAC	640 connections since March 1979
CADUCEE	2,000 operational circuits
TRANSPLEX	530 service channels

AUDIOCONFERENCE	83 service centers
EUROSIONAL	12,500 customer receivers
RADIOTELEPHONE	4,300 customer sets
PRESS FACSIMILES	27 service connections
AUTOMATIC WAKEUP RINGS	560,000 since February 1979
ANSWERING SERVICES	63,000 customers
S 360 TELECOPIERS	1,000 sets installed

Under Development

TELETEL	Beginning of experimentation at Velizy in December 1980
ELECTRONIC YEARBOOK	Beginning of experimentation in Ille et Vilaine in December 1981
HIGH VOLUME TELECOPIER	Marketable as of mid-1981
TELEALARM FOR THE AGED	Service opening in November 1980
EQUIPMENT FOR THE VOLUME PROCESSING AND TRANSMISSION OF TEXTS	Marketable as of mid-1982
TELECOM-1 SATELLITE	Beginning of service in 1983
TOURIST TELEINFORMATION SERVICE	Beginning of service in mid-1980
BANK MESSAGE TRANSFERS	Service as of the end of 1980
COMMERCIAL TELEPROCEDURES (SIMPLEX COM)	Beginning of service mid-1981.

5157

CSO: 8119/1487

FRANCE

BRIEFS

EXPERIMENTAL RADIO STATION--France INTER has obtained authorization to broadcast from its experimental station at Meulin. Jean-Pierre (?Pinot), producer in charge of Meulin-FM on 91.1 mhz has 1 year as from 16 September to prove the interesting character of this experiment which will then be assessed by a special commission made up of 17 judges, just as in the case of all other Radio France local stations already in existence.

CSO: 3500

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DATE FILMED**

Sept. 25, 1980

JP